

Atlantic Ocean Basin

The Atlantic Ocean Basin is comprised of a single HUC (02080110) encompassing the eastern half of Virginia's Eastern Shore whose coastal lagoons and barrier islands are largely unaltered by human impact and are considered the best remaining Atlantic coast wilderness. The basin is located within the Conservancy's Chesapeake Bay Lowlands Ecoregion and has significant acreage protected through local, state, federal and private efforts. Conservation targets include nearshore Atlantic marine fauna, coastal estuarine and lagoon systems, the barrier island systems, migratory shorebirds, waterfowl, land birds and raptors, and breeding barrier island and lagoon birds.

The projects discussed in this section serve as mitigation for permitted impacts within the Atlantic Ocean Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2010 are provided below. The role of these projects in the improvement of water quality and benefit to fish and wildlife has proven appropriate for funding through the program and was approved by the Corps.

There have been no proposed non-tidal wetland projects in this basin, although 1.28 acres of impacts have accrued in the basin with a mitigation liability of 2.10 credits. To date, the Fund has not been used to mitigate for stream impacts in this basin.

The following table provides a summary of projects for which funds were approved in this basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 1: Approved Project Summary for the Atlantic Ocean Basin | | | | | | |
|--|--------------------------------------|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| AO-1 | Virginia Coast Reserve (SAV Beds) | M | 6/10/2005 | 0 | 50,000 | 0 |
| AO-2 | Virginia Coast Reserve (Oyster Beds) | M | 6/10/2005 | 0 | 156,350 | 0 |
| AO-3 | Virginia Coast Reserve (SAV Beds II) | M | 8/5/2008 | 0 | 50,000 | 0 |
| | | | Totals | 0 | 256,350 | 0 |
| | | | Grand Total | 256,350 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Atlantic Ocean Basin. In addition,

the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted.

| Table 2: Tidal Wetland Project Summary for the Atlantic Ocean Basin | | | | | | | | |
|--|--------|-------------|-------|---|--------|-------|------------------|------------------|
| Project Information | | Tidal Marsh | SAV | Oyster | Tidal | Tidal | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest | Rest | Rest | Enh | Pres | | |
| AO-1 | M | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 10.00 | 2.00 |
| AO-2 | M | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 3.00 | 0.60 |
| AO-3 | M | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 10.00 | 2.00 |
| Acre Sub-totals | | 0.00 | 20.00 | 3.00 | 0.00 | 0.00 | 23.00 | 4.60 |
| Credit Sub-totals | | 0.00 | 4.00 | 0.60 | 0.00 | 0.00 | | |
| Total Acres of Tidal Impacts | | | | | 1.01 | | | |
| Total Mitigation Liability | | | | | 1.01 | | | |
| Total Proposed Credits | | | | | 4.60 | | | |
| *Percent of Wetland Acreage Replacement | | | | | 455.45 | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | |
| C - Closed | | | | PC - Pending project closure | | | | |
| *It should be noted that the restoration in this basin is "out of kind" and is credited at a 5:1 ratio | | | | | | | | |

Project Summaries

The following section provides a detailed summary of each project located within the Atlantic Ocean Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

AO-1 Virginia Coast Reserve (SAV Beds)

Please refer to the 2007 Annual Report for a detailed project description.

The purpose of this project is to restore ten acres of submerged seagrass beds, primarily eelgrass (*Zostera marina*), within the seaside coastal bays of the Eastern Shore. Monitoring was conducted aerially in the spring for 2010, the final year required. The monitoring shows successful establishment of seagrass beds and the dramatic increase in coverage by seagrass over the past five years.

This restoration and the activities described for AO-1 are a small part of a much larger effort to restore seagrass beds along the Eastern Shore. Additional information about the full restoration project may be found at <http://web.vims.edu/bio/sav/sav09/index.html>. An interactive map site using Google Earth allows various views of the beds from differing levels: <http://web.vims.edu/bio/sav/maps.html>.

AO-2 Virginia Coast Reserve (Oyster Beds)

Please refer to the 2007 Annual Report for a detailed project description.

The purpose of this project is to restore four acres of functional oyster reefs in the coastal bays of the Eastern Shore. Monitoring was scheduled for a total of five years. The fifth year monitoring event for the site was completed in 2009. Annual monitoring reports were submitted to the Corps during the spring of the subsequent year.

Both reefs were monitored for oyster density (per square meter), spat fall and oyster growth, biomass, and total reef acreage. TNC will continue to monitor and manage the reefs as part of their Native Oyster Restoration and Adaptive Management Program at the Virginia Coast Reserve.

The total acreage of reefs restored as part of the project is 3.01 acres. The final year of required monitoring was 2009. Due to the unique nature of the activities in this project a 5:1 ratio is applied to the crediting of project. The Conservancy anticipates closing this project in 2011.

AO-3 Virginia Coast Reserve (SAV Beds II)

The purpose of this project is to restore ten acres of submerged seagrass beds, primarily eelgrass (*Zostera marina*), within the seaside coastal bays of the Eastern Shore. The funding for this project was approved by the Corps on August 5, 2008. This project was sponsored and implemented by the Virginia Institute of Marine Science (VIMS). VIMS harvested and broadcast a minimum of 100,000 seeds per acre in the fall of 2008 to cover a total of five acres and an additional five acres in 2009. The eelgrass plots are concentrated in the Gull Marsh area, specifically Spider Crab Bay. Monitoring is scheduled to take place for a total of five years, ending in 2013. Annual monitoring reports are submitted to the Corps by the end of January each year.

In each of the four previous years VIMS had planted 5 acres of eelgrass using seeds. Tasks for 2010 were limited to monitoring only. The spring 2010 aerial assessment suggests that eelgrass plants are persisting in the plots. Through 2010, over 317 acres have been planted, with seagrass beds covering approximately 4200 acres of bottom in several coastal bays. Monitoring of the establishment and persistence of the beds will be conducted annually until 2013. Due to the unique nature of the activities in this project a 5:1 ratio is applied to the crediting of the project.

Big Sandy Basin

The Big Sandy Basin is comprised of two HUCs (0507202 and 0507201) that flow northwest out of the Appalachian Mountains of Southwestern Virginia into Kentucky and West Virginia. This basin is within the Conservancy's Cumberland and Southern Ridge and Valley and Central Appalachian Ecoregions.

The Fund has been used to mitigate 0.11 acres of non-tidal wetland impacts and 3,006 linear feet of stream impacts in the Big Sandy Basin. Through 2010, the Conservancy has not requested funds to pursue any mitigation projects in this basin.

Chesapeake Bay Basin

The Chesapeake Bay Basin is comprised of three HUCs (02080101, 02080102, and 02080109) that surround one of the largest and most productive bay ecosystems on the east coast of the United States. The basin is located within the Conservancy's Chesapeake Bay Lowlands Ecoregion and is the focal area of several conservation groups, including the Chesapeake Bay Foundation and the Alliance for the Chesapeake Bay, as well as efforts of federal, state, and local governments. Conservation targets include migratory waterfowl, high-energy beaches, and bayside estuarine systems.

The projects discussed in this section serve as mitigation for permitted impacts within the Chesapeake Bay Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates are given for each project as applicable. No new projects were proposed in 2010. Additional funding for one project was approved. Complete descriptions of projects approved during 2010 are provided below.

The following table provides a summary of projects for which funds were approved in the Chesapeake Bay Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 3: Approved Project Summary for the Chesapeake Bay Basin | | | | | | |
|--|--|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| CB-1 | Dameron Marsh (Smith 1) | M | 10/9/1997 | 105,752 | 10,000 | 0 |
| CB-2 | New Point Comfort (Trimmer) | M | 1/11/2000 | 100 | 1,736 | 0 |
| | | | 8/28/2008 | 2,945 | 0 | 0 |
| CB-3 | Dragon Run (Calhoun 1; Piedmont Farms) | M | 2/6/2004 | 150,000 | 0 | 50,000 |
| CB-4 | Dragon Run (Byrd) | M | 8/5/2004 | 43,800 | 0 | 43,800 |
| CB-5 / CH-12 | Eastern Virginia Phragmites Control | M | 8/30/2002 | 0 | 20,000 | 0 |
| | | | 9/9/2003 | 0 | 20,000 | 0 |
| | | | 8/31/2004 | 0 | 12,666 | 0 |
| CB-6 | Dragon Run (Calhoun 2; Piedmont Farms) | M | 2/1/2005 | 66,588 | 0 | 28,538 |
| CB-7 | Dragon Run (Calhoun 3; Piedmont Farms) | M | 4/25/2005 | 12,000 | 0 | 0 |
| CB-8 / YK-4 | Upper Crab Neck (BP North America) | M | 4/21/2005 | 42,500 | 0 | 0 |
| | | | 2/22/2007 | 7,120 | 0 | 0 |
| CB-9* | Guinea Neck Site | F | 6/1/2006 | 6,800 | 0 | 0 |
| CB-10 | East River (Brooks/Ober) | M | 10/5/2006 | 28,496 | 0 | 0 |
| | | | 2/22/2007 | 192,450 | 0 | 0 |
| CB-11 | Dragon Run (Friends of Dragon Run) | M | 12/7/2006 | 66,300 | 0 | 11,700 |
| | | | 6/16/2008 | 12,114 | 0 | 2,138 |
| CB-12 | Guilford Shores Site | M | 12/7/2006 | 3,732 | 9,000 | 0 |
| CB-13 | Dameron Marsh/Hughlett Point/Fleet Bay (Thompson et al) | M | 7/27/2007 | 2,750 | 2,750 | 0 |
| | | | 6/16/2008 | 40,000 | 0 | 0 |
| | | | 11/2/2008 | 313,000 | 0 | 0 |
| CB-14* | York Complex (Harris Creek site) | M | 8/10/2007 | 2,500 | 2,500 | 0 |
| CB-15 | Dragon Run site | M | 8/10/2007 | 122,472 | 0 | 0 |
| CB-16 | Jacobus Creek (Hampton) | M | 9/24/2008 | 0 | 9,372 | 0 |
| CB-17 | Dameron Marsh/Hughlett Point/Fleet Bay (Thompson, William) | M | 11/2/2008 | 313,000 | 0 | 0 |
| CB-18 | Dragon Run site #2 | M | 3/16/2009 | 113,297.40 | 25,177.20 | 113,297.40 |
| | | | 8/11/2010 | 45,000.00 | 45,000.00 | 10,000.00 |
| CB-19 | Dragon Run (Carlson) | A | 3/16/2009 | 5,000.00 | 0 | 0 |
| | | M | 5/18/2009 | 479,526.00 | 0 | 0 |
| CB-20 | Dragon Run site #3 | M | 12/21/2009 | 17700 | 0 | 0 |
| | | | Totals | 2,194,942 | 158,201 | 259,473 |
| | | | Grand Total | 2,612,617 | | |
| *Project is no longer pursued due to landowner constraints or the results of feasibility studies | | | | | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

| Table 4: Closed Project Summary for the Chesapeake Bay Basin | | | | | | | | |
|---|----------------------------|---------------------------|-----------------------------|-----------------------------|--------------------------------|------------------------|---------------------------------|---------------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Returned (\$) | Amount Unallocated (\$) | Wetland Credits | Stream Activity | |
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| CB-2 | 1/11/2000 | 11/29/2009 | 4,781.00 | 0.00 | 576.00 | 4.34 | N/A | N/A |
| | 8/28/2008 | | | | | | | |
| CB-3 | 2/6/2004 | 12/16/2008 | 200,000.00 | 143,196.00 | 577.00 | 5.95 | 6,613 | N/A |
| CB-4 | 8/5/2004 | 3/16/2009 | 87,600.00 | 65,000.00 | 66,065.84 | 0.26 | 2,205 | N/A |
| CB-5/ CH-12 | 8/30/2002 | 8/14/2007 | 52,666.25 | 0.00 | 9,475.00 | 1.4 | N/A | N/A |
| | 9/9/2003 | | | | | | | |
| | 8/31/2004 | | | | | | | |
| CB-6 | 2/1/2005 | 12/16/2008 | 95,126.00 | 55,677.00 | 0.00 | 4.52 | 1,550 | N/A |
| CB-7 | 4/25/2005 | 12/16/2008 | 12,000.00 | 3,044.00 | 0.00 | 0.36 | N/A | N/A |
| CB-9 | 6/1/2006 | 7/27/2007 | 6,800.00 | 0.00 | 0.00 | N/A | N/A | N/A |
| CB-12 | 12/7/2006 | 8/5/2008 | 12,732.00 | 0.00 | 12,457.00 | N/A | N/A | N/A |
| CB-13 | 6/16/2008 | 12/21/2009 | 358,500.00 | 0.00 | 158,582.93 | 15.4 | N/A | N/A |
| CB-14 | 8/10/2007 | 12/16/2008 | 5,000.00 | 0.00 | 2,500.00 | N/A | N/A | N/A |
| | | Totals | 835,205.25 | 266,917.00 | 250,233.77 | 32.23 | 10,368.00 | N/A |

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Chesapeake Bay Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 5: Non-Tidal Wetland Project Summary for the Chesapeake Bay Basin | | | | | | | | | | |
|--|--------|-----------------|--------|---|-------------|--------|------------------|------------------|-------------------|-----------------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected Acreage (ac) |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | | |
| CB-1 | M | 18.71 | 13.72 | 0 | 18.71 | 0 | 51.14 | 21.33 | N/A | 0 |
| CB-2 | C | 0 | 11.18 | 0 | 0 | 2.79 | 13.97 | 1.26 | 1.26 | 0 |
| CB-3 | C | 0 | 59.53 | 0 | 0 | 0 | 59.53 | 5.95 | 5.95 | 47.45 |
| CB-4 | C | 0 | 2.64 | 0 | 0 | 0 | 2.64 | 0.26 | 0.26 | 33.81 |
| CB-6 | C | 0 | 37.14 | 0 | 0 | 16.18 | 53.32 | 4.52 | 4.52 | 0 |
| CB-7 | C | 0 | 3.49 | 0 | 0 | 0.21 | 3.7 | 0.36 | 0.36 | 0 |
| CB-8/ YH-4 | PC | 0 | 361.1 | 0 | 0 | 150.4 | 511.5 | 43.63 | N/A | 0 |
| CB-10 | M | 12.5 | 5.9 | 0 | 2.73 | 18.2 | 39.33 | 14.18 | N/A | 0 |
| CB-11 | PC | 0 | 34 | 0 | 0 | 13.4 | 47.4 | 4.07 | N/A | 0 |
| CB-13 | C | 0 | 93 | 0 | 0 | 35 | 128 | 11.05 | 11.05 | 158 |
| CB-15 | PC | 0 | 15 | 0 | 0 | 2.62 | 17.62 | 1.63 | N/A | 28.38 |
| CB-17 | P | 5.2 | 95 | 0 | 0 | 23 | 123.2 | 15.85 | N/A | 157.83 |
| CB-18 | LP | 0 | 66 | 0 | 0 | 44 | 110 | 8.80 | N/A | 69 |
| CB-19 | P | 3 | 91.35 | 0 | 12.15 | 37.34 | 143.84 | 14.81 | N/A | 28 |
| CB-20 | PC | 0 | 109 | 0 | 0 | 39 | 148 | 12.85 | N/A | 107 |
| Sub-totals | | 39.41 | 998.05 | 0.00 | 33.59 | 382.14 | 1453.19 | 160.56 | 23.41 | 629.47 |
| Total Acres of Non-Tidal Impacts | | | | | 46.62 | | | | | |
| Total Mitigation Liability | | | | | 88.28 | | | | | |
| Total Proposed Credits | | | | | 160.56 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | 84.5 | | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | | |
| C - Closed | | | | PC - Pending project closure | | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | | |

| Table 6: Tidal Wetland Project Summary for the Chesapeake Bay Basin | | | | | | | | | |
|---|--------|--------------|---|---------------|---------------|------------------|------------------|-------------------|----------------------|
| Project Information | | Tidal Marsh | Tidal | Tidal | Upland Buffer | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected |
| Project ID | Status | Rest | Enh | Pres | Pres | | | | |
| CB-1 | M | 0 | 0 | 13.5 | 0 | 13.5 | 1.35 | N/A | 0 |
| CB-2 | C | 0 | 0 | 30.77 | 0 | 30.77 | - | 3.08 | 0 |
| CB-5/CH-12 | C | 0 | 70 | 0 | 0 | 70 | - | 1.40 | 0 |
| CB-13 | C | 0 | 0 | 33 | 21 | 54 | - | 4.35 | 0 |
| CB-16 | D, PC | 0 | 0 | 3.58 | 1.84 | 5.42 | 0.45 | N/A | 42.58 |
| CB-17 | P | 10.8 | 0 | 40 | 7 | 57.8 | 15.15 | N/A | 0 |
| CB-18 | LP | 0 | 0 | 66 | 0 | 66 | 6.6 | N/A | 0 |
| Acre Sub-totals | | 10.80 | 70.00 | 186.85 | 29.84 | 243.49 | 23.55 | 8.83 | 42.58 |
| Credit Sub-totals | | 10.80 | 1.40 | 18.69 | 1.49 | | | | |
| Total Acres of Tidal Impacts | | | 1.07 | | | | | | |
| Total Mitigation Liability | | | 1.07 | | | | | | |
| Total Proposed Credits | | | 32.38 | | | | | | |
| Percent of Wetland Acreage Replacement | | | 1009.3 | | | | | | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | | | | | |
| P - Planning / permitting | | | M - Mitigation monitoring | | | | | | |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | | | | | |
| C - Closed | | | PC - Pending project closure | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 1,399 linear feet of permitted stream impacts in the Chesapeake Bay River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Chesapeake Bay Basin. To date all projects have been approved through pre-USM funds.

| Table 7: Stream Project Summary for the Chesapeake Bay Basin | | | | | |
|--|----------------|-----------------------------|--|--|-------------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| CB-3* | C | 24.24 | 6,613 | Riparian buffer preservation of 6,613 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 100 to 225 feet from the edge of the protected stream and wetland complex. | Reported under the wetlands summary |
| CB-4* | C | 5.55 | 2,205 | Riparian buffer preservation of 2,205 lf along the right bank of Timber Branch Swamp with an existing mature wooded buffer extending 100 feet from the edge of the protected stream and wetland complex. | Reported under the wetlands summary |
| CB-6* | C | 7.12 | 1,550 | Riparian buffer preservation of 1,550 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex. | 0 |
| CB-11* | PC | 3.6 | 800 | Riparian buffer preservation of 800 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex. | 0 |
| CB-18 | LP | 32.5 | 17,000 | Riparian buffer preservation along Dragon Run and un-named tributaries with existing mature wooded buffer extending 200 feet from the stream and wetland complex. | Reported under the wetlands summary |
| CB-19 | P | 4.35 | 8,000 | Riparian buffer preservation along Dragon Run and un-named tributaries with existing buffer extending 200 feet from stream or existing as wetlands. | Reported under the wetlands summary |
| CB-20 | PC | 41 | 5,500 | Riparian buffer preservation along Dragon Run and un-named tributaries with existing buffer extending 200 feet from stream or existing as wetlands. | Reported under the wetlands summary |
| | Totals | 118.36 | 41,668 | | 0 |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |

Project Summaries

The following section provides a detailed summary of each project located within the Chesapeake Bay Basin for which the Corps authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Please refer to earlier reports as indicated below for detailed descriptions of projects funded prior to 2010.

CB-1 Dameron Marsh (Smith 1)

The purpose of this project is to conduct non-tidal wetland establishment, non-tidal and tidal wetland preservation, and upland buffer restoration and preservation at the Dameron Marsh property in Northumberland County. The funding for this project was approved by the Corps on October 9, 1997. The site was purchased by the Conservancy on December 10, 1997. The site is now managed as a State Natural Area Preserve (NAP) by the Virginia Department of Conservation and Recreation (DCR) Natural Heritage Program. Long-term protection is achieved through the dedication and maintenance of the site as a NAP.

According to the results of five years of hydrological monitoring through 2010, the majority of the lower “swale” areas of the site exhibited wetland hydrology. These areas are generally dominated by OBL and FACW species and are underlain by soils which are developing redoximorphic characteristics. The distinction between upland and wetland is generally abrupt and coincides with the increasing prevalence of woody vegetation in former field crowns, particularly *Morella cerifera*. The 2008 wetland mitigation monitoring of the site showed that 40% of the vegetation plots on the site exhibited wetland plant communities and that all of the plots exhibited the woody plant stem densities required by the success criteria for the site.

All groundwater monitoring wells deployed in 2009 exhibited continuous saturation for greater than 12.5% of the growing season. No monitoring was conducted in 2010. Previous vegetative monitoring efforts have identified several invasive herbaceous species on the project site, including common reed, *Phragmites australis*. *Phragmites* has been the focus of aerial spray control measures that have been conducted since 2002. Nonetheless, small portions of the wetland restoration/creation areas contain monotypic and mixed stands of *Phragmites australis*, where the species represents greater than 5% total aerial cover. While the previous eradication efforts were found to have been largely successful, additional limited assessment and treatment efforts are recommended for 2011 to address isolated stands of *Phragmites*. The Conservancy is currently developing a long-term management plan for *Phragmites* to ensure additional wetland areas don't become dominated by *Phragmites*. This is the ninth year post construction and mitigation monitoring is scheduled through 2011 with a final report and wetland boundary delineation to be submitted to the Corps in 2011.

CB-2 New Point Comfort (Trimmer)

The project was officially closed in 2009. Please reference the 2009 Annual Report for details on this project.

CB-3 Dragon Run (Calhoun 1; Piedmont Farms)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

CB-4 Dragon Run (Byrd)

This project was officially closed in 2009. Please reference the 2008 Annual Report for details on this project.

CB-5/CH-12 Eastern Virginia Phragmites Control

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CB-6 Dragon Run (Calhoun 2; Piedmont Farms)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

CB-7 Dragon Run (Calhoun 3; Piedmont Farms)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

CB-8/YK-4 Upper Crab Neck (BP America)

The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Upper Crab Neck (BP America) site in York County. The funding for this project was approved by the Corps on April 21, 2005 and on February 22, 2007. The property was donated to the Conservancy by BP America on May 11, 2006. The Conservancy plans to transfer this site to the Virginia Department of Game and Inland Fisheries (DGIF) subject to Corps approval of the deed restriction. No additional monitoring is required for this project.

A delineation of surface waters and wetlands was confirmed by the Corps in April 2002 and the mapping from this delineation was used to estimate wetland and upland acres in Chesapeake Bay Basin and York River Basin using GIS. The Conservancy is negotiating a transfer of the property, and will request official closure of the project once the transfer is completed.

CB-9 Guinea Neck Site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CB-10 East River (Brooks/Ober)

The purpose of this project is to conduct non-tidal wetland restoration and creation and upland buffer restoration at the East River (Brooks/Ober) property in Mathews County. The project involves a donation of a conservation easement to the Middle Peninsula Land Trust (MPLT) and donation of fee simple interest to the Conservancy. Long-term protection is achieved through the monitoring and enforcement of the easement by the MPLT.

Based upon a feasibility study conducted by the Conservancy, funding was secured in 2007 to restore 12.5 acres of forested non-tidal wetlands and 4.2 acres of upland field through vegetation establishment techniques. Reforestation of the site occurred in spring of 2008. The project also includes the preservation of 5.87 acres of non-tidal forested wetland and 18.2 acres of upland forest.

Monitoring of the project in 2010 indicated that the success criteria for wetland hydrology were met in 75% of the continuous groundwater monitoring wells installed in early 2009. Under normal precipitation conditions, 3 of the 4 wells met the 12.5% standard for duration of inundation or saturation during the growing season. The remaining well met the 5 to 12.5% standard for duration of saturation during the growing season and had strong corroborative evidence of wetland hydrology in the form of surface ponding. Therefore, under normal rainfall conditions, all 4 wells met the wetland hydrology criteria.

Vegetation monitoring in 2010 indicated successful establishment of woody tree and shrub species following planting in 2008. The woody vegetation standard of >400 stems per acre was met by 7 of the 8 plots (87%). The hydrophytic vegetation criterion was met by 7 of the 8 plots (87%). All plots exceeded the goal of 50% aerial cover in the herbaceous layer. Invasive species coverage was below 5% in all plots. However, none of the 8 plots met the criteria of a predominance of hydrophytic vegetation in the herbaceous layer. This is likely the result of the predominance of remnant old-field species from the previous agricultural land use, and is not indicative of non-wetland conditions on the site. This metric will likely improve as the site matures. This is the second year post construction and mitigation monitoring is scheduled through 2018 with reports submitted to the Corps in 2011, 2013, 2015, and 2018.

CB-11 Dragon Run (Friends of Dragon Run)

The purpose of this project is to conduct non-tidal wetland and associated upland buffer preservation and stream and associated upland riparian buffer preservation at this site in King and Queen County. The funding for this project was approved by the Corps on December 7, 2006. A subsequent funding approval was granted on June 16, 2008. The Friends of Dragon Run closed the land acquisition of the property on June 5, 2008. Long-term protection of the site will be accomplished through the monitoring and enforcement of an easement by the Virginia Outdoors Foundation (VOF). No additional monitoring is required for this project.

Stream mitigation consists of the preservation of a 200 foot mature forested riparian buffer along the right bank of 1,004 linear feet (3.60 acres) of Dragon Run at the southern end of the property. A wetlands and surface waters delineation was completed in October 2008, and confirmed on February 12, 2009. The delineation confirmed the presence of 33.86 acres of palustrine forested and scrub-shrub wetlands, and 1,004 linear feet of stream channel. The Conservancy will request project closure in 2011.

CB-12 Guilford Shores Site

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

CB-13 – Dameron Marsh/Hughlett Point/Fleet Bay (Thompson et al.)

This project was officially closed in 2009. Please reference the 2009 Annual Report for details on this project.

CB-14 – York Complex (Harris Creek Site)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

CB-15 – Dragon Run Site

The purpose of this project is to conduct a wetland and upland buffer stream preservation project along Dragon Run in King and Queen County, Virginia. On August 13, 2007, the Corps approved the purchase of the conservation easement over the 46 acre property. Long-term protection will be provided by the conservation easement. Monitoring and enforcement of the conservation easement will maintain the long-term protection of the property.

The Nature Conservancy is currently pursuing the purchase of the conservation easement on this property. A wetlands delineation of the site to determine mitigation credits was completed in December of 2008, and confirmed on February 26, 2009. The delineation confirmed the presence of 14.85 acres of palustrine forested wetlands. The Conservancy will request official closure of the site following easement recordation.

CB-16 – Jacobus Creek (Hampton)

The purpose of this project is to perform wetland and upland buffer preservation on the bayside of Northampton County, Virginia. On September 24, 2008 the Corps approved this project. The site contains 3.58 acres of tidal emergent marsh, as determined by a wetlands delineation completed in 2009, and 1.84 acres of upland buffer that will be preserved to protect the water quality of the nearby aquatic systems. The long term protection of the site was accomplished through the recording of a donated conservation easement to the Conservancy on December 8, 2008. Monitoring and enforcement of the easement will provide the long-term protection. No additional monitoring will be required for this project.

The Conservancy will request closure of this project in 2011 pending confirmation of a surface water delineation of the site to determine credit.

CB-17 – Dameron Marsh/Hughlett Point/Fleet Bay (William Thompson)

The purpose of this project is to provide non-tidal and tidal wetland restoration, tidal and non-tidal preservation, and upland buffer preservation of this 223-acre site in Northumberland County, Virginia. On November 2, 2008 the Corps approved funding for the restoration and preservation of the site. The long-term protection of the site was accomplished through the recordation of a conservation easement held by the Conservancy on December 23, 2008. Long-term protection will be achieved through the monitoring and enforcement of the easement by the Conservancy.

The wetland restoration of 16.0 acres of wetlands will be accomplished through minor

grading of the site, plugging/filling of existing drainage ditches and planting of trees on the site. Additional opportunities to incorporate restoration and enhancement of tidal fringe wetlands along the shoreline of Ball Creek may exist, and are currently being investigated further. Approximately 95 acres of non-tidal and 40 acres of tidal wetland preservation also occur on the site. A 48.00 acre area of upland buffer preservation will ensure the protection of the water quality of the restored and preserved wetlands. An additional 46 acres of land is protected under the easement.

The design portion of the restoration plan is expected to occur in spring/summer of 2011 with implementation of design occurring in fall/winter of 2011/2012.

CB-18 Dragon Run site #2

The purpose of this project is to purchase land for wetland and upland buffer preservation along the Dragon Run in Gloucester County, Virginia. On March 16, 2009 the Corps approved funding for the purchase of this property. Additional funding was approved in August 2010. The site contains a significant wetland complex along Dragon Run that has not been disturbed in over 100 years. The project consists of the preservation in perpetuity of approximately 132.25 acres of palustrine forested wetlands and 44 acres of associated forested upland buffer. The property contains approximately 17,000 feet of frontage (approximately 10,000 on one bank; 3,500 linear feet on both banks) on the west side of the main stem of Dragon Run and along tributaries to the Dragon that drain from the property.

The long term protection of the site will be accomplished through the purchase and recordation of a conservation easement held by the Conservancy. The Conservancy will request closure of this project pending finalization of land protection and completion of a surface water delineation of the site to determine credit.

CB-19 Dragon Run (Carlson)

The purpose of this project is to provide a wetland and upland restoration and stream, wetland and upland buffer preservation on a 176.5-acre property along Dragon Run in Gloucester County and King and Queen County, Virginia. On May 18, 2009, the Corps approved funding for the restoration and preservation of the site. The Conservancy purchased the property in July 2009.

The site contains a wetland complex (estimated 91.35 acres, NWI) along Dragon Run. Approximately 48 upland acres are being managed for loblolly pine and hardwoods (e.g. oak, poplar). The property contains approximately 4,100 feet of frontage on the main stem of Dragon Run, 2,200 feet of which encompasses both banks. Dragon Run is a TNC Aquatic Portfolio Conservation Area based on its high water quality and aquatic diversity. The site also falls within the TNC Dragon Run Forest Block Conservation Area, a relatively unfragmented block of mixed pine and hardwood forests. A 15.15 acre field that was formerly used as pasture for horses contains approximately 6.5 acres of hydric soils (Eunola Fine Sandy Loam) and an associated visible seep. Years of agricultural activities have caused the hydric soils area to no longer function as a true wetland. Minor grading to achieve wetland restoration or enhancement is being evaluated.

The project is proposed to generate approximately 3 acres of wetland restoration, 91.3 acres of wetland preservation, 12 acres of upland buffer restoration, 37 acres of upland

buffer preservation, and 1,400 linear feet (4.35 acres) of stream buffer mitigation. An additional 28.3 acres of land will be protected through this project.

The design portion of the restoration plan is expected to occur in spring/summer of 2011 with implementation of design occurring in fall/winter of 2011/2012.

CB-20 Dragon Run Site #3

The purpose of this project was to purchase land for a wetland and stream preservation project along Dragon Run in Middlesex County, Virginia. The Conservancy no longer expects to use the approved funding to complete the acquisition of this site. Project closure is planned for 2011.

Chowan River Basin

The Chowan River Basin is comprised of five HUCs (03010201, 03010202, 03010203, 03010204, and 03010205) located in southeastern Virginia extending into northeastern North Carolina. It encompasses the northernmost portion of the Albemarle-Pamlico drainage and is among the best developed embayed wetland environments of the outer Mid-Atlantic Coastal Plain Ecoregion estuary and includes much of the original extent of the Great Dismal Swamp. Conservation targets include blackwater swamp aquatic system, riverine and basin swamp forest, brownwater tributaries and rivers, Atlantic white cedar swamp, bottomland hardwood forest, Roanoke logperch, Atlantic pigtoe, red-cockaded woodpecker, and seepage wetlands.

The projects discussed in this section serve as mitigation for permitted impacts within the Chowan River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates are given for each project as applicable. One new project was approved in 2010. Complete descriptions of projects approved during 2010 are provided below.

The following table provides a summary of projects for which funds were approved in the Chowan River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 8: Approved Project Summary for the Chowan River Basin | | | | | | |
|--|---|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| CH-1 | Northwest River (Kellam Riganto) | M | 12/20/1995 | 37,020 | 0 | 0 |
| | | | 8/28/2008 | 4,449 | 0 | 0 |
| CH-2 | North Landing River (Onesimus Ministries) | M | 6/30/1997 | 24,325 | 0 | 0 |
| CH-3 | Dismal Swamp (Bruff) | M | 10/27/1997 | 37,000 | 0 | 0 |
| | | | 8/28/2008 | 4,969 | 0 | 0 |
| CH-4 | North Landing River (Mayo) | M | 8/28/1998 | 8,800 | 0 | 0 |
| CH-5 | Northwest River (Benefits) | M | 10/13/1998 | 331,215 | 0 | 0 |
| | | | 8/28/2008 | 6,361 | 0 | 0 |
| CH-6 | Northwest River (Hall) | M | 5/26/1999 | 143,204 | 0 | 0 |
| CH-7 | Nawney Creek (Knight) | M | 5/23/2000 | 120,110 | 0 | 0 |
| CH-8 | Northwest River (Su) | M | 3/16/2001 | 395,230 | 0 | 0 |
| | | | 2/8/2008 | 25,000 | 0 | 0 |
| CH-9 / LJ-4 | Northwest River (Stephens) | M | 7/17/2002 | 625,000 | 0 | 0 |
| CH-10 | Northwest River (Powers) | M | 3/7/2003 | 333,341 | 0 | 0 |
| | | M | 10/27/2004 | 20,000 | 0 | 0 |
| CH-11 | Nawney Creek (Fentress) | M | 12/19/2003 | 135,000 | 0 | 0 |
| CB-5 / CH-12 | Eastern Virginia Phragmites Control | M | 8/30/2002 | 0 | 20,000 | 0 |
| | | | 9/9/2003 | 0 | 20,000 | 0 |
| | | | 8/31/2004 | 0 | 12,666 | 0 |
| CH-13 | Northwest River (SP Forests, LLC) | M | 2/2/2006 | 366,700 | 0 | 0 |
| CH-14 | Raccoon Creek Pinelands site | M | 2/8/2008 | 0 | 0 | 77,150 |
| CH-15 | Blackwater River (Owen) | M | 7/17/2009 | 0 | 0 | 77,150.00 |
| CH-16 | Nottoway River Site | M | 8/11/2010 | 0.00 | 0.00 | 17,529.20 |
| | | | Totals | 2,617,724 | 52,666 | 171,829 |
| | | | Grand Total | 2,842,219 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

Table 9 provides a summary of projects which have closed in the Chowan River Basin.

| Table 9: Closed Project Summary for the Chowan River Basin | | | | | | | |
|---|---------------------|--------------------|----------------------|-------------------------|-----------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Wetland Credits | Stream Activity | |
| | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| CH-2 | 6/30/1997 | 8/14/2007 | 24,325 | 25 | 5.3 | N/A | N/A |
| CH-3 | 6/1/1997 | 11/29/2009 | 37,000.00 | 73.18 | 3.17 | N/A | N/A |
| | 8/4/2008 | | 4,969.05 | | | | |
| CH-4 | 8/28/1998 | 8/14/2007 | 8,800 | 40 | 1.13 | N/A | N/A |
| CH-5 | 8/24/98 | 12/21/2009 | 331,214.88 | 0 | 82.75 | N/A | N/A |
| | 8/04/08 | | 6,361.48 | | | | |
| CB-5/ CH-12 | 8/30/2002 | 8/14/2007 | 52,666 | 9,475 | 1.4 | N/A | N/A |
| | 9/9/2003 | | | | | | |
| | 8/31/2004 | | | | | | |
| CH-14 | 1/22/2008 | 9/28/2009 | 77,150 | 77,150 | N/A | N/A | N/A |
| Totals | | | 542,486 | 86,763 | 93.75 | N/A | N/A |

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Chowan River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted.

| Table 10: Tidal Wetland Project Summary for the Chowan River Basin | | | | | | | |
|--|--------|------------|---|-------|--------------------|------------------|------------------|
| Project Information | | Salt Marsh | Tidal | Tidal | Upland Buffer Pres | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest | Enh | Pres | Pres | | |
| CB-5/CH-12 | C | 0 | 70 | 0 | 0 | 70 | 1.4 |
| Acre Sub-totals | | 0 | 70 | 0 | 0 | 70 | |
| Credit Sub-totals | | 0 | 1.4 | 0 | 0 | | |
| Total Acres of Tidal Impacts | | | | | 0.01 | | |
| Total Mitigation Liability | | | | | 0.01 | | |
| Total Proposed Credits | | | | | 1.4 | | |
| Percent of Wetland Acreage Replacement | | | | | 0 | | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | | | |
| P - Planning / permitting | | | M - Mitigation monitoring | | | | |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | | | |
| C - Closed | | | PC - Pending project closure | | | | |

| Table 11: Non-Tidal Wetland Project Summary for the Chowan River Basin | | | | | | | | | | |
|--|--------|-----------------|---------|---|-------------|--------|------------------|------------------|-------------------|-----------------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected Acreage (ac) |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | | |
| CH-1 | D,PC | 0 | 125.34 | 0 | 0 | 40.55 | 165.89 | 14.56 | N/A | 0 |
| CH-2 | C | 0 | 51.8 | 0 | 0 | 2.4 | 54.2 | - | 5.30 | 0 |
| CH-3 | C | 2.66 | 0 | 0 | 7.6 | 0 | 10.26 | - | 3.17 | 0 |
| CH-4 | C | 0 | 9.45 | 0 | 0 | 3.75 | 13.2 | - | 1.13 | 0 |
| CH-5 | C | 12 | 706 | 0 | 0 | 6 | 724 | - | 82.75 | 11 |
| CH-6 | M | 25 | 0 | 0 | 2 | 3.8 | 30.8 | 25.32 | N/A | 0 |
| CH-7 | M | 6.6 | 0 | 0 | 11.4 | 0 | 18 | 7.36 | N/A | 0 |
| CH-8 | M | 5.05 | 73.28 | 0 | 47.95 | 7 | 133.28 | 15.92 | N/A | 0 |
| CH-9/ LJ-4 | M | 65 | 112.1 | 0 | 6 | 2.8 | 185.9 | 76.75 | N/A | 0 |
| CH-10 | M | 11.15 | 97.1 | 0 | 14.6 | 60.15 | 183 | 24.84 | N/A | 0 |
| CH-11 | M | 9.29 | 0 | 0 | 13.5 | 0 | 22.79 | 10.19 | N/A | 0 |
| CH-13 | P | 30 | 120 | 0 | 0 | 0 | 150 | 42.00 | N/A | 0 |
| CH-15 | D,PC | 0 | 33.6 | 0 | 0 | 1.5 | 35.1 | 3.435 | N/A | 0 |
| Sub-totals | | 166.75 | 1328.67 | 0.00 | 103.05 | 127.95 | 1726.42 | 220.39 | 92.35 | 11.00 |
| | | | | | | | | | | |
| Total Acres of Non-Tidal Impacts | | | | | 41.71 | | | | | |
| Total Mitigation Liability | | | | | 76.47 | | | | | |
| Total Proposed/Completed Credits | | | | | 312.74 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | 399.8 | | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | | |
| C - Closed | | | | PC - Pending project closure | | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 2,173 linear feet of permitted stream impacts in the Chowan River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Chowan River Basin.

| Table 12: Stream Project Summary for the Chowan River Basin | | | | | |
|--|-----------------------|------------------------------------|---|--|--|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| CH-15* | D, PC | 22.9 | 6,460 | Riparian buffer preservation along 2,710 lf of the south bank of the Blackwater River and Cypress Swamp. Riparian buffer preservation along 3,750 lf of one bank of an un-named tributary. Riparian buffers 200' wide. | Reported under the wetlands summary |
| CH-16 | LP | 62.5 | 9,890 | Riparian buffer preservation along 1,810 lf of the north bank of the Nottoway River, 3,600 lf along both banks of Harwells Branch, 1,390 lf along the upper east bank of Harwells Branch, and 3,090 lf along the west bank of an unnamed tributary. Riparian buffers ranging from 100-450' wide. | 277.5 |
| Totals | | 85.4 | 16,350 | | 277.5 |
| Total Impacts (lf) | | 2,173 | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Project Summaries

The following section provides a detailed summary of each project located within the Chowan River Basin for which the Corps authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Please refer to earlier reports for additional background information on projects approved prior to 2010.

CH-1 Northwest River (Kellam Riganto)

The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Northwest River (Kellam Riganto) property in the City of Chesapeake. The funding for this project was approved by the Corps on December 20, 1995. Subsequent funding was approved on August 28, 2008. The site was purchased by the Conservancy on December 22, 1995. Long-term protection is achieved through Conservancy ownership. No additional monitoring is required for this project. An assessment level wetland delineation of the site will be submitted to the Corps in 2011. The Conservancy anticipates closing the project in 2011, pending delineation confirmation.

CH-2 North Landing River (Onesimus Ministries)

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CH-3 Dismal Swamp (Bruff)

The project was officially closed in 2009. Please reference the 2009 Annual Report for details on this project.

CH-4 North Landing River (Mayo)

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CH-5 Northwest River (Benefits)

The project was officially closed in 2009. Please reference the 2009 Annual Report for details on this project.

CH-6 Northwest River (Hall)

The purpose of this project is to conduct non-tidal wetland and upland buffer restoration and upland buffer preservation at the Northwest River (Hall) property in southern Chesapeake. The funding for this project was approved by the Corps on May 26, 1999. Additional background information is available in the 2008 Annual Report.

Due to the overall success of the site in meeting wetland criteria in most years, the Conservancy will conduct a final delineation of the site to determine mitigation credits and request to close this project in 2011.

CH-7 Nawney Creek (Knight)

The purpose of this project is to conduct non-tidal wetland and upland buffer restoration at the Nawney Creek (Knight) property in Virginia Beach. The funding for this project was approved by the Corps on May 23, 2000. The site was purchased by the Conservancy on September 27, 2000, and long-term protection is achieved through this ownership. Monitoring was completed in 2003, 2004, 2005, 2007, 2008 and 2010. Additional supplemental hydrology monitoring was conducted in 2009.

Hydrologic monitoring in 2010 determined that 2 of 6 (33%) monitoring wells meet wetland hydrology criteria under normal conditions. The woody vegetation standard of >400 stems per acre is met by 14 of the 15 plots (93%). Density of woody tree, sapling and shrub species averaged 1,959 stems per acre across all plots. At least 9 of the 15 plots exhibited sapling/shrub stratum dominated by oak species and baldcypress, species originally planted in 2001. Wetland plants, rating Facultative or wetter (FAC, FACW, OBL) contributed to greater than 50% of the dominant herbaceous stratum aerial cover in 5 of the 15 monitoring plots, indicating that a hydrophytic herbaceous community has not become established on the site. Nonetheless, the hydrophytic vegetation criterion was met by 15 of the 15 plots (100%).

Portions of the site exhibiting wetlands hydrology, mainly near plugged ditches and associated berms, likely meet all of the criteria to be considered a forested wetland. Successful forested wetlands comprise an estimated 6.60 acres of the site. This site is on a post-construction and mitigation monitoring plan that extends through 2013 with reports submitted to the Corps in 2013.

CH-8 Northwest River (Su)

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Su) property in southern Chesapeake. The funding for this project was approved by the Corps on March 16, 2001. Additional funding for this project was approved on February 8, 2008. The site was purchased by the Conservancy on April 28, 2000, and long-term protection is achieved through this ownership. Two adjacent properties (projects CH-5 and CH-6) were acquired in earlier purchases, together representing significant wetland restoration and preservation acres.

Hydrological monitoring through 2007 generally indicated a majority of monitoring wells exhibited continuous saturation for greater than 12.5% of the growing season. However, in 2008, a majority of the hydrological monitoring wells failed to read, resulting in insufficient data to determine whether site hydrology exists. The Conservancy re-deployed the wells at the site and collected hydrology data during the 2009 and 2010 growing seasons. Two of the nine wells monitored in 2009 met the 12.5% success criteria for continuous saturation. Four of the nine wells showed continuous saturation for 8-12.5% of the growing season and one of the wells failed to show continuous saturation for greater than 5% of the growing season. However, the critical season for wetland hydrology (January – March) was drier than normal for 2009. While no monitoring wells showed continuous saturation exceeding 12.5% of the growing season in 2010, six of the nine wells monitored in 2010 showed continuous saturation for at least 10% of the growing season.

2008 vegetation sampling data shows that 47% of the site is meeting hydrophytic vegetation criteria. Monitoring also shows that a majority of the site is meeting the woody stem density required by the site success criteria. Monitoring and observations of the vegetation development on the site indicate that loblolly pine (*Pinus taeda*) is colonizing in large numbers, resulting in high stem densities, particularly in the drier areas of the site (~5 acres); however, the majority of other colonizing woody sapling species are native, wetland plants.

Based on existing monitoring information, the Conservancy expects approximately 5.05 acres to continue to meet wetland criteria. However, additional monitoring and field-based observations in fulfillment of a detailed wetlands boundary delineation confirmation in 2011 will likely show additional successful mitigation acreage. This is the ninth year following construction and mitigation monitoring is scheduled through 2011 with a report submitted to the Corps in 2011.

CH-9/LJ-4 Northwest River (Stephens)

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Stephens) property in Chesapeake. The funding for this project was approved by the Corps on July 17, 2002. The Conservancy proposed to restore wetlands and uplands through site modifications and to preserve wetlands and uplands. The site was purchased by the Conservancy on November 15, 2002, and long-term protection is achieved through this ownership.

In spite of dry precipitation conditions for the majority of the spring season 2010, 16 of 19 wells met the 12.5% standard for duration of saturation during the growing season. The 3 remaining wells met the 5 to 12.5% standard for duration of saturation during the growing season on the high end of that scale (between 9 and 11%), and all 3 wells had strong corroborative evidence of wetland hydrology. Therefore, under normal rainfall conditions, all 19 wells are expected to meet wetland hydrology criteria.

The hydrophytic vegetation standard was met by 60 of the 60 plots (100%). The standard of greater than 400 stems per acre of woody vegetation was met by 60 of the 60 plots (100%). Woody stem density and survival of planted stock was estimated from this data and 58 of the plots (97%) exceeded the 30% survival goal for planted seedlings (108 stems per acre). Estimated density values ranged from 52 to 753 stems per acre with an average value of 349 stems per acre, which represents a 97% survivorship of planted stock. The most prevalent woody species, as measured by frequency of occurrence, were sweet gum (*Liquidambar styraciflua*) and red maple (*Acer rubrum*). Of the 34 woody species found, 2 species were characterized as "highly invasive" on the Department of Conservation and Recreation Invasive Alien Plant Species List (2009). The invasive species Chinese privet (*Ligustrum sinense*) was present in 17 plots, mostly in the vicinity of the old home site, and multiflora rose (*Rosa multiflora*) was found in one plot. Treatment of these two species is planned for 2011.

The site has met all of the criteria to be considered a forested wetland, and wildlife have begun to colonize the site. Based on monitoring completed in 2010, approximately 130 acres of the site are considered successful mitigation wetlands. This is the seventh year post construction and mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2013.

CH-10 Northwest River (Powers) The purpose of this project is to conduct non-tidal wetland restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Powers) property in Chesapeake. The initial funding for this project was approved by the Corps on March 7, 2003. The Conservancy requested additional funding for acquisition and restoration, which was authorized by the Corps on October 27, 2004. The site was purchased by the Conservancy on January 31, 2001 and the site

has been designated as a Natural Area Preserve under the management of Department of Conservation and Recreation (DCR).

A closely spaced ditch network historically drained the agricultural fields on the site. In late 2004, the ditches in the agricultural fields were filled, the fields were graded to remove field crowns, and a perimeter berm was installed to prevent flooding adjacent properties. In early 2005, the restoration site was planted with 6,300 and 2,800 bare root tree and shrub seedlings respectively. Five automatic recording shallow groundwater wells were installed in 2005.

Monitoring of the project in 2009 indicated that the 12.5% success criteria for wetlands hydrology was met in 3/5 (60%) of the continuous groundwater monitoring wells. One well satisfied the 8-12% growing season standard, and one well failed to record in the field. Vegetation monitoring in July of 2009 indicated successful establishment of wetland woody tree and shrub species. Of the nineteen plots sampled, sixteen had greater than 400 stems per acre (84%), exceeding the 400 stems per acre success criteria. Stem density values ranged from 247 to 3,128 stems per acre, with an average of 984 stems per acre observed across all plots. Stem densities for planted woody species ranged from 15 to 370 stems per acre, with an average of 133 planted stems per acre measured across all plots. Wetland plants contributed to greater than 50% of the dominant woody vegetation, as measured by relative stem density, in 19/19 (100%) of the monitoring plots. Monitoring of the herbaceous plant community revealed total plant canopy coverage ranging from 34% to 111%, and averaging 66%. Wetland plants contributed to greater than 50% of the dominant plant aerial coverage in 8/19 (42%) of the monitoring plots, indicating that a hydrophytic herbaceous community may not be established across the entire site. However, wetland plants contributed to greater than 50% of the dominant plant community across both the herbaceous and woody strata in 16/19 (84%) of the plots. Currently successful forested wetland plant communities comprise approximately 11.15 acres of the mitigation property. No monitoring occurred in 2010. 2010 was the sixth year post construction and mitigation monitoring is scheduled through 2014 with reports submitted to the Corps in 2011 and 2014.

CH-11 Nawney Creek (Fentress)

The purpose of this project is to conduct non-tidal wetland and upland buffer restoration at the Nawney Creek (Fentress) property in Virginia Beach. The funding for this project was approved by the Corps on December 19, 2003. The site was purchased by the Conservancy on December 13, 2003, and long-term protection is achieved through this ownership. The 2010 growing season represents the 7th full growing season of the project and the 5th reporting event. Year 10 monitoring is planned for 2013 with reports submitted to the Corps in 2013.

Large portions of the site exhibit ponding for a significant duration in most years. Annual hydrology results in 2004 and 2005 indicated that much of the site was meeting the hydrologic criteria. Fewer wells met requirements for wetland hydrology in 2007 and 2008. The public notice issued by USACE in March 2008 characterizes meteorologic and hydrologic conditions antecedent to the growing season as drier than typical and therefore unreliable for well data monitoring wetland determination. Percentage of the site exhibiting hydrophytic vegetation was estimated as 33% in 2008, whereas 66% and 80% of the site met the success criteria in 2005 and 2007, respectively, indicating drier

conditions may have supported development of non-hydrophytes.

During monitoring in 2010 a high groundwater table was observed, and hydrologic monitoring confirmed that 5 of 5 (100%) monitoring wells will meet wetland hydrology criteria under normal conditions. The woody vegetation standard of >400 stems per acre is met by 7 of the 15 plots (47%). Field crowns generally exhibited lower stem density, while plots exhibiting successful, mixed early-successional forest communities were generally located in closer proximity to remnant drainage features. Density of woody tree, sapling and shrub species ranged from 3 to 3,718 stems per acre and averaged 654 stems per acre across all plots. Wetland plants, rating Facultative or wetter (FAC, FACW, OBL) contributed to greater than 50% of the dominant herbaceous stratum aerial cover in 8 of the 15 monitoring plots (53%), indicating that a hydrophytic herbaceous community has not become established on the entire site. Nonetheless, the hydrophytic vegetation criterion was met by 14 of the 15 plots (100%), when dominants across all strata are considered.

The entire site will exhibit wetlands hydrology during normal conditions. This was confirmed in monitoring plots located in proximity to both remnant site drainage features and field crowns. However, successful forested wetland plant communities are generally located near remnant drainage features, with lower stem densities for woody strata occurring in field crowns. The resulting zonation indicates possible initial tree mortality following planting due to herbivory and environmental conditions. Field crowns and similar areas exhibiting successful wetlands hydrology, yet low woody stem densities, will be targeted for re-planting with hydrophytic tree species during the 2011 growing season (approximately 2 to 3 acres). Currently successful forested wetland plant communities comprise approximately 9.29 acres of the Fentress property. This is the seventh year post construction and mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2013.

CB-5/CH-12 Eastern Virginia Phragmites Control

A summary of the project details is included under the Chesapeake Bay Basin.

CH-13 Northwest River (SP Forests LLC)

The purpose of this project is to conduct non-tidal wetland restoration and preservation at the Northwest River (SP Forests, LLC) property in the City of Chesapeake. The funding for this project was approved by the Corps on February 2, 2006. An amended approval letter was issued by Corps on February 22, 2007. The Conservancy proposed to restore drained forest land by plugging a large ditch system and to preserve wetlands on 150 acres located within the 3,800-acre parcel. The site was purchased by the Virginia Department of Game and Inland Fisheries (DGIF) on September 13, 2006, and is managed as the Cavalier Wildlife Management Area.

This project is in the planning/permitting phases and is planned for construction in 2011.

CH-14 Raccoon Creek Pinelands site

This project was officially closed 2009. Please reference the 2009 Annual Report for details on this project.

CH-15 Blackwater River (Owen)

The purpose of this project is to conduct stream, wetland, and riparian buffer preservation along the Blackwater River in Surry County, Virginia. On September 28, 2009 the Corps approved funding for the costs associated with conducting a stream and wetland delineation along with acquisition of a conservation easement. The overall site is 58 acres, which is comprised of approximately 33.6 acres of wetlands and 1.5 acres of upland buffer that will be preserved in perpetuity, protected from all development, timber harvesting and other land disturbing activities. These areas will be preserved to protect the water quality of the nearby aquatic systems. The long term protection of the site was accomplished through the recordation of a conservation easement, which was granted to the Conservancy on November 20, 2009. No additional monitoring will be required for this project.

The Owen tract is situated along the floodplain of the Blackwater River, immediately downstream of the Blackwater River/Cypress Swamp confluence. The channels of all three waterways on the property are stable and require no restoration or enhancement actions. The floodplain area flanking the streams is dominated by semi-permanently flooded swamp forest supporting a mature cypress (*Taxodium distichum*) /tupelo (*Nyssa aquatica*) community. Various oak (*Quercus*) species, poplar (*Liriodendron tulipifera*) and ash (*Fraxinus*) occur along the seasonally flooded swamp margins and the upper reaches of the un-named tributary. The Virginia Department of Conservation and Recreation has identified floodplain areas in the vicinity of the subject tract as core areas of high conservation value in their Conservation Lands Needs Assessment for coastal Virginia. The Conservancy has identified the entire Blackwater River watershed as a priority conservation area in its Ecoregional Plan for the Mid-Atlantic Coastal Plain Ecoregion and as an Aquatic Portfolio Conservation Area for the South Atlantic Basin.

The Conservancy is currently completing a surface water delineation of the property. Pending confirmation of the delineation, the Conservancy will request credit determination and closure of this project in 2011.

CH-16 Nottoway River site

The purpose of this project is to conduct a stream and riparian buffer preservation project along the Nottoway River in Sussex County, Virginia. On August 11, 2010, the Corps approved funding for the costs associated with conducting a stream and wetland delineation along with acquisition costs associated with the donation of a conservation easement on the property. The long term protection of the site will be accomplished through the recordation of a conservation easement to the Conservancy. No additional monitoring will be required for this project.

This 340-acre property is located in the fall-line region along the Nottoway River. It has 0.3 miles of river frontage and contains two small tributary streams; one along the eastern boundary (unnamed) and the other in the central portion of the tract (Harwells Branch). Most of the property supports 22-yr. old planted loblolly pine, with older hardwoods dominating along steeper slopes above the streams and river. Hardwoods also dominate a periodically flooded bottomland area adjacent to the river.

Mitigation activities on this property include the preservation of approximately 9,890 linear feet of the Nottoway River and tributaries, including 1,810 linear feet of the north

bank of the Nottoway River, approximately 3,600 linear feet along both banks of Harwells Branch, another 1,390 linear feet along the upper east bank of Harwells Branch and 3,090 linear feet along the west bank of the unnamed tributary. These streams will be protected by a forested buffer ranging from 100-450 feet wide. The buffer area along the Nottoway River includes the entire floodplain. The total mitigation area is 63 acres in size. Based on NWI data, the buffer includes 2.1 acres of saturated hardwood forested wetlands situated in the floodplain of Harwells Branch. Additional wetland acreage potentially exists along the Nottoway River floodplain. A delineation will be conducted to verify location and extent of wetlands on the property. The project will include an additional 277 of upland not included in the mitigation area, which will be reported as "additional protected acreage."

The Nottoway River has been identified by the Conservancy as a high priority waterway for aquatic species conservation in southeastern United States. It is one of few Atlantic slope river systems of its size with relatively unobstructed flow in a heavily forested setting (over 60% forest cover in the watershed). The intact condition of the fall-line reach of the river is particularly significant, as this is a species-rich area supporting a mix of species with affinities to Piedmont and Coastal Plain streams. The Virginia Natural Landscape Assessment prepared by the Virginia Department of Conservation and Recreation has designated this as one of five areas of "outstanding ecological integrity" in southside Virginia. An occurrence of the federally endangered Roanoke logperch (*Percina rex*) has been documented in the Nottoway River approximately 0.5 mile upstream and approximately 4 miles downstream of this property. Suitable logperch habitat occurs in the river section adjacent to the property. The Nottoway is also a stronghold for various mussel species, supporting among the highest diversity and greatest number of mussels of all Atlantic slope streams in Virginia. In addition to Roanoke logperch, state-rare species tracked by VA DCR/Division of Natural Heritage located within 1 mile of the subject property include yellow lance (*Elliptio lanceolata*), yellow lampmussel (*Lampsilis cariosa*), Appalachian jewelwing (*Calopteryx angustipennis*) and Elliott sida (*Sida elliotii*).

This easement represents the first protected acreage along the fall-line section of the Nottoway. Other protected lands along the river include the 30,000-acre Fort Pickett Military Reservation located approximately 20 miles upstream, DCR's 600-acre Chub Sandhill Natural Area Preserve approximately 35 miles downstream and an 850-acre easement held by the Conservancy located approximately 37 miles downstream.

The Conservancy anticipates completing a surface water delineation of the property following completion of land protection in 2011. Pending confirmation of the delineation, the Conservancy will request closure of this project in 2011.

Lower James River Basin

The Lower James River Basin is comprised of two HUCs (02080208 and 02080206) encompassing the portion of the James River from Richmond east to Norfolk. This basin is located within both the Conservancy's Mid-Atlantic Coastal Plain and the Chesapeake Bay Lowlands Ecoregions and is the focal area of several conservation groups, including the James River Association and the Chesapeake Bay Foundation, as well as efforts of federal, state and local governments. Conservation targets include tidal freshwater and brackish marshes, Chesapeake Bay lowlands estuarine and stream systems, waterfowl and colonial nesting waterbirds, blue crabs, and spawning habitat for striped bass, shad, herring, and yellow perch.

The projects discussed in this section serve as mitigation for permitted impacts within the Lower James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates for 2010 are given for each project as applicable. No new projects were approved in 2010.

Due to historical hydrology modifications, one of the non-tidal projects (CH-9/LJ-4) mitigates for impacts within both the Lower James River Basin and the Chowan River Basin. The total funds authorized by the Corps and crediting value for this project have been appropriately divided between the two basins.

The following table provides a summary of projects for which funds were approved in the Lower James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type. See project summaries for more information.

Table 13: Approved Project Summary for the Lower James River Basin

| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
|-------------|---|---------------------|---------------------|---------------------------------|-----------------------------|----------------------|
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| LJ-1 | Chickahominy River (Walters) | M | 4/6/2000 | 401,105 | 0 | 0 |
| LJ-2 | Chickahominy River (Cheswick Park) | M | 9/10/2001 | 0 | 0 | 15,000 |
| LJ-3 | VMRC Oyster Reef | M | 7/12/2002 | 0 | 50,650 | 0 |
| CH-9 / LJ-4 | Northwest River (Stephens) | M | 7/17/2002 | 625,000 | 0 | 0 |
| LJ-5* | Isle of Wight site | A | 5/30/2003 | 2,500 | 0 | 0 |
| LJ-6 | Chickahominy River (Rogers-Chenault) | M | 12/14/2004 | 149,450 | 0 | 0 |
| LJ-7 | Great Dismal Swamp Section (Jacobson) | A | 8/3/2006 | 4,000 | 0 | 0 |
| | | AC, C | 12/7/2006 | 1,575,025 | 0 | 0 |
| LJ-8 | Lower Chickahominy River (Church Point Farm, LLC) | AC, M | 12/15/2006 | 49,786 | 0 | 0 |
| LJ-9 | James River site | M | 12/15/2006 | 0 | 0 | 319,032 |
| LJ-10 | James River (VCU) | F, C | 8/10/2007 | 21,000 | 0 | 21,000 |
| | | F | 11/16/2007 | 1,050 | 0 | 1,050 |
| | | C | 2/8/2008 | 6,500 | 0 | 6,500 |
| | | AC, M | 6/27/2008 | 478,700 | 38,000 | 478,700 |
| | | AC, M | 8/11/2010 | 102,500 | 0 | 102,500 |
| LJ-11 | Chickahominy River site | A | 8/28/2008 | 5,000 | 0 | 5,000 |
| | | M | 8/11/2010 | 300,000.00 | 0.00 | 300,000.00 |
| LJ-12 | James River (Blair's Wharf) | M | 11/2/2008 | 82,000 | 0 | 738,000 |
| LJ-13 | James River Site #4 | M | 8/11/2010 | 47,500.00 | 0.00 | 47,500.00 |
| | | | Totals | 3,851,116 | 88,650 | 2,034,282 |
| | | | Grand Total | 5,974,048 | | |

*Project is no longer pursued due to landowner constraints or the results of feasibility studies

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Lower James River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 14: Non-Tidal Wetland Project Summary for the Lower James River Basin | | | | | | | | | | |
|--|--------|-----------------|--------|------|-------------|---|------------------|------------------|-------------------|-----------------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected Acreage (ac) |
| Project ID | Status | Rest/ Cr | Pres | Enh | Rest | Pres | | | | |
| LJ-1 | M | 16.66 | 198.00 | | 23.00 | 32.78 | 270.44 | 39.63 | | |
| LJ-4/CH--9 | M,CA | 65.00 | 112.10 | | 10.00 | 2.80 | 189.90 | 77.02 | | |
| LJ-6 | C | | 64.70 | | | 29.60 | 94.30 | 7.95 | 7.95 | |
| LJ-7 | P | 30.00 | 23.50 | 2.50 | 24.00 | 4.00 | 84.00 | 34.98 | | |
| LJ-8 | C | | 369.00 | | | 47.30 | 416.30 | 33.09 | 33.09 | 516.50 |
| LJ-10 | P, LP | 50.00 | 15.00 | | | | 65.00 | 51.50 | | 172.00 |
| LJ-11 | LP | | 114.00 | | | 46.00 | 160.00 | 13.19 | | 52.00 |
| LJ-12 | LP | | 15.00 | | | 26.00 | 41.00 | 2.80 | | 53.00 |
| Sub-totals | | 161.66 | 915.30 | 2.50 | 57.00 | 188.5 | 1324.94 | 260.56 | 41.04 | 793.50 |
| Total Acres of Non-Tidal Impacts | | | | | 70.34 | | | | | |
| Total Mitigation Liability | | | | | 132.7 | | | | | |
| Total Proposed Credits | | | | | 260.6 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | 229.8 | | | | | |
| LP - Pending finalization of land protection | | | | | | I - Restoration/Enhancement/Creation activities in progress | | | | |
| P - Planning / permitting | | | | | | M - Mitigation monitoring | | | | |
| D - Pending delineation / assessment | | | | | | CA - Corrective actions necessary | | | | |
| C - Closed | | | | | | PC - Pending project closure | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | | |

| Table 15: Tidal Wetland Project Summary for the Lower James River Basin | | | | | | | | |
|---|--------|-------------|------|--------|----------|---|------------------|------------------|
| Project Information | | Tidal Marsh | SAV | Oyster | Tidal | Tidal | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest | Rest | Rest | Enh | Pres | | |
| LJ-3 | C | 0.00 | 0.00 | 0.34 | 0.00 | 0.00 | 0.34 | 0.07 |
| LJ-8 | C | 0.00 | 0.00 | 0.00 | 0.00 | 11.94 | 11.94 | 1.00 |
| LJ-10 | P, I | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 15.00 |
| Acre Sub-totals | | 15.00 | 0.00 | 0.34 | 0.00 | 11.94 | 27.28 | 16.07 |
| Credit Sub-totals | | 15.00 | 0.00 | 0.07 | 0.00 | 1.00 | | |
| Total Acres of Tidal Impacts | | | | | 0.43 | | | |
| Total Mitigation Liability | | | | | 0.43 | | | |
| Total Proposed Credits | | | | | 16.07 | | | |
| Percent of Wetland Acreage Replacement | | | | | 3,488.37 | | | |
| LP - Pending finalization of land protection | | | | | | I - Restoration/Enhancement/Creation activities in progress M - Mitigation monitoring CA - Corrective actions necessary PC - Pending project closure | | |
| P - Planning / permitting | | | | | | | | |
| D - Pending delineation / assessment | | | | | | | | |
| C - Closed | | | | | | | | |

| Table 16: Closed Projects for the Lower James River Basin | | | | | | | |
|---|---------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Restoration |
| LJ-2 | 9/10/2001 | 7/27/2007 | 15,000 | 0 | 0 | 0 | 104 |
| LJ-3 | 7/12/2002 | 7/27/2007 | 50,650 | 0 | 0 | 0.07 | 0 |
| LJ-5 | 5/30/2003 | 7/27/2007 | 2,500 | 1,000 | 0 | 0 | 0 |
| LJ-6 | 12/14/2004 | 7/5/2008 | 149,500 | 93,043 | 7.95 | 0 | 0 |
| LJ-9 | 12/15/2006 | 8/11/2010 | 319,032.00 | 319,032.00 | 0 | 0 | 0 |
| | | Totals | 536,682 | 413,075 | 7.95 | 0.07 | 104 |

As noted in Section II, the Fund has been used to mitigate for 22,983 linear feet of permitted stream impacts in the Lower James River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Lower James River Basin. Through 2010, all stream projects have been funded with pre-USM funds.

| Table 17: Stream Project Summary for the Lower James River Basin | | | | | |
|--|----------------|-----------------------------|--|---|--|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| LJ-2 | C | 0.04 | 104 | Stabilized a headcut with a series of step pools serving as grade control within an unnamed tributary to Upham Brook. Stream banks were shaped along 104 lf of channel to provide additional floodplain area. | 0 |
| LJ-10* | P, LP | 86 | 10,950 | Removal of a dam on Lake Charles fed by several tributary streams, primarily Kimages Creek. Restoration will be accomplished through the removal of a portion of the existing dam where it intersects the preexisting stream channel and the planting of the wetlands created by this dam breach. | Reported under non-tidal wetland summary |
| LJ-11* | LP | 51 | 4,861 | Stream preservation along 1,300 lf of the Chickahominy River and 3,561 lf of unnamed tributaries to the Chickahominy River. Riparian buffer preservation along both banks of the river and streams. Buffer on the Chickahominy exists as wetlands for 300'. Buffer on the tributaries is 200' wide, and portions exist as wetlands. | Reported under non-tidal wetland summary |
| LJ-12* | LP | 29.5 | 6,720 | Two hundred foot buffers will be preserved on both wetland and stream systems along the James River, two unnamed tributaries that flow directly into the James River, and 15 acres of PFO wetlands. | Reported under non-tidal wetland summary |
| LJ-13* | LP | 2.5 | 1,010 | Stream preservation along 232 lf of the James River and 778 lf of Harris Creek. Preservation of 100' wide riparian buffer on the north bank of the James River and 150-200' wide buffer on both banks of Harris Creek (portions exist as wetlands). | 0 |
| | | | | | |
| Totals | | 169.04 | 23,645 | | 0 |
| Total Impacts (lf) | | | 22,983 | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Project Summaries

The following section provides a summary of each project located within the Lower James River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in previous reports as indicated.

LJ-1 Chickahominy River (Walters)

Please reference the 2007 Annual Report for additional background information about this project.

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Chickahominy River (Walters) property near Richmond. The objectives of this project are to restore 20 acres of forested wetland and restore 23 acres of upland buffer in addition to preservation of 198 acres of wetland and 32.8 acres of upland buffer.

Investigations of soils, hydrology and vegetation in the wetland restoration areas at the property demonstrate that a forested wetland community is becoming established. Hydrological monitoring during the 2009 growing season showed hydrologic conditions favorable to wetlands development. Of the seven wells deployed in 2009, four exhibited saturation in the upper part of the soil for greater than 12.5% of the growing season, while the remaining three failed to record data. Considerable natural colonization by volunteer woody species has been confirmed during previous monitoring events. Density of seedlings estimated in vegetation plots exceeds 400 stems per acre with most abundant species including red maple, sweet gum, bald cypress and willow oak. Assessment of herbaceous cover in randomly located subplots indicated a predominance of hydrophytic vegetation. Invasive woody species observed on the project site during previous monitoring events in 2003 and 2004 include tree of heaven and multiflora rose. Efforts have been taken to identify and control the occurrence and distribution of these species, including hand cutting and spraying with herbicide. This corrective action has largely contained the woody invasive problem, but small areas of tree of heaven and multiflora rose still persist. Currently successful forested wetland communities comprise approximately 16.66 acres of the mitigation property. This is the ninth year post construction and mitigation monitoring is scheduled through 2011 with reports submitted to the Corps.

LJ-2 Chickahominy River (Cheswick Park)

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

LJ-3 VMRC Oyster Reef

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CH-9/LJ-4 Northwest River (Stephens)

The Stephens property (detailed under the Chowan River Basin) is also included as part of Lower James River Basin due to the split drainage.

LJ-5 Isle of Wight Site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

LJ-6 Chickahominy River (Rogers-Chenault)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

LJ-7 Great Dismal Swamp Northwest Section (Jacobson et al.)

Please refer to the 2007 Annual Report for additional background information about this project.

The purpose of this project is to conduct non-tidal wetland restoration, enhancement and upland buffer restoration and non-tidal wetland and upland buffer preservation at this 84-acre property in Chesapeake. The property contains approximately 54 acres of cropland, 22 acres of forested wetlands and several acres of drained forested wetland and upland forest. In the past a ditch system was installed on this site to lower the ground water table to make farming more successful.

A shallow groundwater table study was conducted at the site during the 2007 growing season. A preliminary design was completed in 2009 and was presented to the City for review. Additional coordination is required and will be ongoing in 2011. The Conservancy anticipates that the mitigation plan will be completed in 2011. Following the completion of the plan, the Conservancy will submit a third request for funding to the Corps to complete the mitigation activities. The Conservancy anticipates that implementation of the mitigation plan will also be completed in 2011.

LJ-8 Lower Chickahominy River (Church Point Farm, LLC)

Please refer to the 2007 and 2009 Annual Report for additional details on this project. The project was closed in 2009.

LJ-9 James River site

Please refer to the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities at a property in James City County (JCC). Negotiations have terminated and the Conservancy requested closure of this project in 2010.

LJ-10 James River (VCU)

Please refer to the 2008 Annual Report for additional background information on this project.

The purpose of this project is to provide restoration of the natural stream channel and wetland habitats resulting from the removal of the dam at the mouth of Kimages Creek on the VCU Rice Center property. The property is located along the James River in Charles City County.

Restoration of the site was initiated in late 2010, and consisted of the removal of approximately 180 linear feet of the existing dam where it intersects the pre-existing stream channel of Kimages Creek. Future phases of restoration include re-establishment of native wetland plant communities in the former impounded areas via seeding and hand planting.

Dam removal resulted in re-establishment of tidal hydroperiod for approximately 20 acres of wetlands and subaqueous bottom areas, while an additional approximately 50 acres of non-tidal wetlands were restored in areas above the influence of daily lunar tides that receive adequate hydrology. A low-flow channel created in the footprint of the constructed dam breach will allow anadromous fish species to migrate into Kimages Creek. Removal of the dam re-establishes the connection between the James River and Kimages Creek, along with re-establishing a true channel for Kimages Creek along approximately 8,500 lf within the former footprint of the lake. A large natural breach was also filled and stabilized to preclude further degradation of the dam, and contribution of eroded sediment to the James River.

Intertidal vegetated and unvegetated wetlands and subaqueous bottom were restored in the footprint of the constructed breach. Buffer areas and fringe marsh habitat near the dam breach activities were re-planted with native herbaceous and tree species. The overall project includes a planting scheme for the restoration of the functions and values of approximately 15 acres of tidal emergent and forested wetlands and approximately 50 acres of non-tidal forested wetlands. Long-term monitoring of wetland conditions will be conducted as part of the restoration project, including development and submittal of an as-built survey, vegetation and hydrology monitoring, and photographic documentation. Initial experimental planting is proposed during the 2011 growing season. The entire restoration site will be monitored following installation of plant materials at a minimum in years 1, 2, 3, 5, 7, 10. Additional informal monitoring is likely beyond year 10 in furtherance of Virginia Commonwealth University's river restoration research objectives.

LJ-11 Chickahominy River site

The purpose of this project is to conduct a non-tidal wetland and stream preservation project along the Chickahominy River in Henrico and New Kent Counties. The project will provide approximately 263 acres of preservation, and include 160 acres of non-tidal wetlands and upland buffer and 4,861 linear feet of stream. The stream buffer will entail approximately 51 acres, and 52 acres will be counted as additional protected acreage. The site is located downstream of LJ-1 (restoration) and upstream of LJ-6 (preservation). Initial funding was approved by the Corps on August 28, 2008. Additional funding was approved in August 2010. The Conservancy expects to complete the acquisition activities in 2011.

LJ-12 James River (Blair's Wharf)

Please refer to the 2008 Annual Reports for details on this project.

The purpose of this project is to conduct a stream, wetland and riparian buffer preservation project at Blair's Wharf on the James River, in Prince George County, Virginia.

The property provides approximately 6,720 linear feet of high quality vegetated riparian buffer along the James River (3,365 feet) and along two unnamed tributaries (3,203 feet and 152 feet) that flow directly into the James River. In addition, there are approximately 15 acres of PFO wetlands on the property. Two-hundred-foot buffers will be established and credited for both wetland and stream systems. Nearly 30 acres will be protected as stream mitigation acreage and over 40 acres will be protected as wetland and wetland buffer mitigation acreage.

The property has been transferred to the US Fish and Wildlife Service. A confirmation by the Army Corps of Engineers of a delineation of the site to determine mitigation credits will be completed in 2011. The Conservancy anticipates requesting official closure of the site in 2011.

LJ-13 James River site #4

The purpose of this project is to conduct a non-tidal wetland and stream preservation project on property in Charles City County along the James River in Virginia. The property includes 6.5 acres of forested land, and provides preservation of 2.5 acres of riparian buffer along 232 linear feet of the north bank of the James River and 778 linear feet of a pristine freshwater creek (Harris Creek). The property also contains four acres of mature bottomland hardwood swamp forest.

This property is part of an area widely known as an American bald eagle stronghold within Virginia. This area is one of the most important areas in eastern North America for this species and additionally supports one of the densest piscivorous bird communities in Virginia (eagles, osprey, herons, egrets, and cormorants). There are several active bald eagle nests in close proximity to this property. This property is also adjacent to the VCU Rice Center and Trust Fund stream and wetland restoration project (LJ-10), and is in close proximity to the James River National Wildlife Refuge (including Trust Fund project Blair's Wharf (LJ-12)), Presquile National Wildlife Refuge, and several Virginia Outdoors Foundation easements and other state and federal land holdings. The property is situated along a portion of the James River that has been identified by the Conservancy as an aquatic stream portfolio reach. The site is also within a mile and half of seven Heritage element occurrences of three species: American bald eagle, peregrine falcon and sensitive joint-vetch.

Funding to assist VCU with acquisition of this property and completion of a conservation easement was approved by the Corps on August 11, 2010. The Conservancy expects to complete the acquisition activities in 2011.

Middle James River Basin

The Middle James River Basin is comprised of four HUCs (02080203, 02080204, 02080205 and 02080207) encompassing the portion of the James River from the Blue Ridge Parkway east to Richmond. This basin is located within the Conservancy's Piedmont Ecoregion. Conservation targets include small Piedmont streams and tributaries, James spiny mussel, isolated wetlands, and working and old growth forests.

The projects discussed in this section serve as mitigation for permitted impacts within the Middle James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. No new projects were approved in 2010. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates for 2010 are given for each project as applicable.

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Middle James River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 19: Non-Tidal Wetland Project Summary for the Middle James River Basin | | | | | | | | | | |
|--|---------------|------------------------|-------------|------------|--------------------|-------------|---|-------------------------|--------------------------|--|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected Acres (ac) |
| Project ID | Status | Rest/ Cr | Pres | Enh | Rest | Pres | | | | |
| *MJ-1 | M, CA | 16.20 | | | 43.80 | | 60.00 | 19.12 | | 30.32 |
| *MJ-3 | C | | 87.12 | | | 12.50 | 99.62 | - | 9.00 | 470.00 |
| Sub-totals | | 16.20 | 87.12 | 0.00 | 43.80 | 12.50 | 159.62 | 19.12 | 9.00 | 499.32 |
| | | | | | | | | | | |
| Total Acres of Non-Tidal Impacts | | | | | 20.45 | | | | | |
| Total Mitigation Liability | | | | | 37.4 | | | | | |
| Total Proposed/Completed Credits | | | | | 28.12 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | 79.2 | | | | | |
| LP - Pending finalization of land protection P - Planning / permitting D - Pending delineation / assessment C - Closed | | | | | | | I - Restoration/Enhancement/Creation activities in progress M - Mitigation monitoring CA - Corrective actions necessary PC - Pending project closure | | | |
| *Project includes stream or tidal wetland mitigation | | | | | | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | | |

The following table provides a summary of projects for which funds were approved in the Middle James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the

funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 19: Approved Project Summary for the Middle James River Basin | | | | | | |
|--|---|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| MJ-1 | Rivanna River (Lamb) | M | 4/10/2001 | 366,450 | 0 | 0 |
| | | M | 10/20/2003 | 0 | 0 | 385,000 |
| | | M | 11/19/2007 | 0 | 0 | 336,550 |
| MJ-2* | Rivanna Watershed site | A | 9/2/2005 | 0 | 0 | 1,500 |
| MJ-3 | Beaumont (Sisters of the Blessed Sacrament) | A | 4/23/2006 | 3,750 | 0 | 3,750 |
| | | M | 12/15/2006 | 110,500 | 0 | 110,500 |
| | | BS | 12/19/2006 | 12,500 | 0 | 12,500 |
| MJ-4 | Southern Shenandoah (Bennett) | M | 8/10/2007 | 0 | 0 | 12,608 |
| MJ-5 | Rivanna Watershed (Meadow Creek site 1) | M | 11/16/2007 | 0 | 0 | 9,994 |
| MJ-6 | Rivanna Watershed (Meadow Creek site 2) | M | 11/16/2007 | 0 | 0 | 1,341,562 |
| MJ-7 | Rivanna Watershed (Meadow Creek site 3) | M | 11/16/2007 | 0 | 0 | 1,215,737 |
| MJ-8 | Rivanna Watershed (Meadow Creek site 4) | M | 11/16/2007 | 0 | 0 | 625,622 |
| MJ-9* | Southern Shenandoah site | M | 2/8/2008 | 0 | 0 | 40,807 |
| MJ-10 | Rivanna Watershed (Meadow Creek Area 3) | M | 12/16/2008 | 0 | 0 | 490,975 |
| MJ-11 | Rivanna Watershed (Meadow Creek Area 4) | M | 12/21/2009 | 0 | 0 | 255,775 |
| | | | Totals | 493,200 | 0 | 4,842,880 |
| | | | Grand Total | 5,336,080 | | |
| *Project is no longer pursued due to landowner constraints or the results of feasibility studies | | | | | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 33,288 linear feet of permitted stream impacts in the Middle James River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Middle James River Basin.

| Table 20: Stream Project Summary for the Middle James River Basin | | | | | |
|--|----------------|-----------------------------|---|---|-------------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| MJ-1* | M, CA | 62.4 | 9,239 | Priority 1 relocation of 1,866 lf of an unnamed tributary and bank shaping along 1,373 lf of a second unnamed tributary to the North Fork of the Rivanna River. Riparian buffer planting 200' wide along both tributaries. Riparian buffer planting (250 feet wide) along a total of 6,000 lf of the North Fork (right bank) and South Fork (left bank) of the Rivanna River. | Reported under the wetlands summary |
| MJ-3* | C | 434 | 36,907 | Riparian buffer preservation of 8,280 lf on the right bank of the James River with buffer ranging from 100 to 300 feet. Stream system preservation of 12,200 lf of Deep Creek, with buffer 300 feet wide. Stream system preservation of 9,420 lf of headwater tributaries to the James River with buffer of 200 feet along each bank. Stream system preservation of 7,920 lf of a headwater tributary to the James River with an existing mature wooded buffer of 300 feet along each bank. | Reported under the wetlands summary |
| MJ-4 | C | 20 | 5,280 | Riparian buffer preservation on 1,009 lf of the left bank of the Moorman's River with mature wooded buffer width of 100 feet. Stream system preservation along both banks of 3,254 lf of Slate Branch and tributaries with an existing mature wooded buffer width of 100 feet. Riparian buffer preservation along 1,017 lf of the right bank of Slate Branch with an existing mature wooded buffer width of 100 feet. | 59 |
| MJ-5 | LP, P | 12.5 | N/A | Provides mature riparian buffer preservation adjacent to the MJ-7 project site. | |
| MJ-6 | LP, P | 28.1 | 3,185 | Stream restoration, bank stabilization, and buffer enhancement along 3,185 lf of Meadow Creek. | |
| MJ-7 | LP, P | 18.29 | 2,497 | Stream restoration, bank stabilization and riparian buffer enhancement along 2,497 lf of Meadow Creek. | |
| MJ-8 | LP, P | 4.515 | 1,270 | Stream restoration, bank stabilization and riparian buffer enhancement along 1,270 lf of Meadow Creek. | |
| MJ-10 | LP, P | 6.6 | 1,500 | Stream and buffer enhancement and buffer preservation on 1,500 linear feet of Meadow Creek. | |
| MJ-11+ | LP, P | 0.99 | 600 | Stream restoration, bank stabilization, and riparian buffer preservation along 600 lf of Meadow Creek. | |
| | Totals | 587.4 | 60,478 | | 59 |
| Total Impacts (lf) | | 33,288 | | | |
| ac - acre | | lf - linear feet | | *Project includes wetland mitigation | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | C - Closed |
| PC - Pending project closure | | | M - Mitigation monitoring | | P - Planning / permitting |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |

| Table 21: Closed Projects Summary for the Middle James River Basin | | | | | | | | |
|---|-----------------------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Activity | |
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| MJ-2 | 9/2/2005 | 7/27/2007 | 1,500 | 0 | 0 | 0 | 0 | 0 |
| MJ-3 | 4/23/2006, 12/15/2006, 12/19/2006 | 12/21/2009 | 253,500 | 20,840.00 | 9 | 0 | 36,907 | 0 |
| MJ-4 | 8/10/2007 | 12/21/2009 | 12,608 | 470.03 | 0 | 0 | 5,280 | 0 |
| MJ-9 | 2/8/2008 | 3/16/2009 | 40,807 | 40,807.00 | 0 | 0 | 0 | 0 |
| | | Totals | \$308,415.00 | \$62,117.03 | 9 | 0 | 42,187 | 0 |

Project Summaries

The following section provides a summary of each project located within the Middle James River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in earlier reports as indicated below.

MJ-1 Rivanna River (Lamb)

Please reference the 2007 and 2008 Annual Reports for details on this project.

The purpose of this project is to conduct non-tidal wetland and upland buffer restoration, stream restoration and enhancement, and riparian buffer planting activities at the Lamb property (also known as the Forks of the Rivanna project) in Albemarle County.

The objective of the wetland portion of this project was to restore a mixture of emergent and forested wetlands (20 acres) and an upland buffer (26 acres). Wetland restoration activities were conducted in 2005. A forested buffer was planted along the wetlands and 6,000 linear feet of the North Fork and South Fork of the Rivanna River in 2003. Stream restoration and enhancement activities were completed in 2005 and included the Priority 1 relocation of 1,866 linear feet of an unnamed tributary to the North Fork of the Rivanna River and bank shaping and installation of in-stream structures on 1,373 linear feet of a second tributary. Planting of live stakes along both tributaries was completed in March 2006.

Monitoring of wetlands hydrology and vegetation within the wetlands restoration area was not required in 2010. Monitoring during the previous growing season (2009) indicated development of a successful 16.2-acre emergent and forested wetland community. In addition, an approximately 2.6-acre open-water and emergent marsh community persists near the center of the wetlands restoration area. The emergent marsh is characterized by long duration of ponding and is dominated by cattail (1.4 acres). An invasive species management plan for known invasive species occurrences has been developed. Control of cattail communities in the wetland restoration area will occur via chemical treatment and additional replanting efforts in 2011 and 2012. This is the sixth year post construction and mitigation monitoring is scheduled through 2014 with reports submitted to the Corps in 2011 and 2014.

Success of the 2003 buffer planting was greatly impacted by the invasive species Johnson grass (*Sorghum halepense*). Johnson grass gained dominance in portions of the upland buffer for the wetland restoration area as well as in other much larger portions of the site and a mechanical/chemical control effort began in 2006 and continued through 2008. The Conservancy planted approximately 21,000 saplings in the 70-acre buffer area along the wetland, tributaries, North Fork, and South Fork of the Rivanna River in spring 2009 to meet success criteria for the site. Johnson grass was treated by spot spraying with an herbicide in summer 2010 and will be treated again in summer 2011. Continued monitoring and control of the Johnson grass will be conducted and corrective action will be performed if necessary.

In addition, cattails have established within the restored stream channel and are causing retention of excess fine-grained particles and siltation within pools and riffles. The cattails do not appear to be affecting overall channel stability or habitat at this time; however, in some areas the degree of obstruction in the channel may cause less than bankfull flows to leave the channel, potentially compromising the stability of those sections. Since 2006, the Conservancy has implemented efforts to remove cattails from the stream and this will continue until the species is managed. The Conservancy organized two volunteer events to remove cattails from the channel and banks in 2010. Cattails were also chemically treated in summer 2010 and will be treated again in spring 2011. The continued growth of the live stakes and the 2009 riparian buffer planting should also help with management of this species in the stream channels.

In addition to Johnson grass and cattail treatment, autumn olive on the site was chemically treated in 2010 and a follow up treatment is scheduled for 2011. Several other species are also scheduled to be treated in 2011 and 2012. The Conservancy has developed and implemented an invasive species management plan for these species.

Year 1 monitoring of the stream buffer, wetland buffer, wetland upland buffer and the live stakes planted along the stream restoration/enhancement reaches was completed in 2010. Monitoring results indicate that 55 of the 64 buffer monitoring plots are meeting the woody stem requirement and the site as a whole is exceeding the 400 woody stem per acre requirement. Six of the wetland buffer and one of the wetland upland buffer plots do not meet the stem density criterion. This is in large part due to the location of these plots. The wetland boundary was recently refined based on wetland monitoring information. Plots for wetland buffer and upland buffer monitoring were located based on the previous wetland boundary, so a number of these plots are now within the wetland restoration area rather than within the buffer area. The Conservancy will relocate plots as needed to ensure plots are located within the buffer areas for the Year 2 monitoring in 2011. Eleven out of 12 live stake monitoring plots are meeting the woody stem requirement. As mentioned above, several invasive species were noted on the property, and an invasive species management plan has been prepared and control efforts for the majority of these species are underway.

Year 5 monitoring of the stream restoration/enhancement reaches completed in 2010 indicates that the stream is stable and is meeting nearly all success criteria. Monitoring results show that the D50 did not remain within the as-built size range for the project overall. It has been determined that the growth of cattails in the channel has caused the retention of more fine particles, thereby decreasing the overall sediment size. The previous drought conditions have also decreased the number of "flushing flows" through the project that allow for coarser bed material to move into the restored reach from

upstream throughout the past two years. However, this does not appear to be affecting overall channel stability or habitat and should resolve itself with the removal of the cattails, growth of the riparian buffer, and increased flow through the channel.

MJ-2 Rivanna Watershed site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

MJ-3 Beaumont (Sisters of the Blessed Sacrament)

This project was officially closed in 2009. Please reference the 2007 and 2009 Annual Reports for details on this project.

MJ-4 Southern Shenandoah (Bennett)

This project was officially closed in 2009. Please refer to the 2007 and 2009 Annual Reports for details on this project.

MJ-5 Rivanna Watershed (Meadow Creek site 1)

Please refer to the 2008 Annual Report for additional background information on this project.

The purpose of the MJ-5, MJ-6, MJ-7, MJ-8, MJ-10, and MJ-11 projects is to conduct stream restoration activities on six adjacent sites along Meadow Creek in the City of Charlottesville and Albemarle County. Each site will be placed under easement or protected via deed restrictions to secure the long term protection of each property. The initial funding for MJ-5, MJ-6, MJ-7, and MJ-8 was approved by the Corps on November 16, 2007, initial funding for MJ-10 was approved by the Corps on December 16, 2008, and initial funding for MJ-11 was approved by the Corps on December 21, 2009. MJ-5, MJ-6, MJ-7, MJ-8, and MJ-10 use pre-USM funding; MJ-11 uses both pre-USM and USM funding.

The Conservancy plans to conduct stream restoration, enhancement, and riparian buffer enhancement and preservation along approximately 9,000 linear feet of Meadow Creek. Once the protection methods are completed, the Conservancy will finalize and implement the restoration plan for these sites. Construction is expected to begin in winter 2011.

MJ-6 Rivanna Watershed (Meadow Creek site 2)

Project description is detailed above at MJ-5.

MJ-7 Rivanna Watershed (Meadow Creek site 3)

Project description is detailed above at MJ-5.

MJ-8 Rivanna Watershed (Meadow Creek site 4)

Project description is detailed above at MJ-5.

MJ-9 Southern Shenandoah site

This project was officially closed in 2009. Please reference the 2009 Annual Report for details on this project.

MJ-10 Rivanna Watershed (Area 3)

Project description is detailed above at MJ-5.

MJ-11 Rivanna Watershed (Area 4)

Project description is detailed above at MJ-5.

Upper James River Basin

The Upper James River Basin is comprised of two HUCs (02080201 and 02080202) encompassing the portion of the James River from the West Virginia border east to the Blue Ridge Parkway. This basin is located within the Conservancy's Central Appalachian Ecoregion. Conservation targets include Central Appalachian river systems (with particular interest to the Cowpasture River and the associated tributaries), montane, non-alluvial wetlands, cave invertebrate communities, bats, alluvial forests and grasslands, pine-oak-heath woodlands, and Central Appalachian mixed hardwood forests.

The projects discussed in this section serve as mitigation for permitted impacts within the Upper James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates for 2010 are given for each project as applicable. No new projects were pursued in 2010.

The following table provides a summary of projects for which funds were approved in the Upper James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 22: Approved Project Summary for the Upper James River Basin | | | | | | |
|---|---|---------------------|---------------------|---------------------------------|-----------------------------|----------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| UJ-1 | Warm Springs Mountain / Cowpasture River (Phillips) | AC, F | 9/1/06 | 22,679 | 0 | 0 |
| | | M | 2/22/07 | 105,320 | 0 | 0 |
| UJ-2 | Warm Springs Mountain / Cowpasture River Site | M | 12/7/06 | 0 | 0 | 149,009 |
| SH-3 / UJ-3 | Laure Fork (Rifle Ridge Farm, LLC) | M | 11/19/07 | 0 | 0 | 0 |
| | | | Totals | 127,999 | 0 | 149,009 |
| | | | Grand Total | 277,008 | | |

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Upper James River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 23: Non-Tidal Wetland Project Summary for the Upper James River Basin | | | | | | | | | |
|--|--------|-----------------|------|------|-------------|------|---|------------------|-----------------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Additional Protected Acreage (ac) |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | |
| UJ-1 | M, CA | 3.09 | 0.05 | 1.78 | 3.81 | 5.16 | 13.89 | 4.20 | 0.00 |
| Sub-totals | | 3.09 | 0.05 | 1.78 | 3.81 | 5.16 | 13.89 | 4.20 | 0.00 |
| | | | | | | | | | |
| Total Acres of Non-Tidal Impacts | | | | | 3.31 | | | | |
| Total Mitigation Liability | | | | | 5.29 | | | | |
| Total Proposed Credits | | | | | 4.20 | | | | |
| Percent of Wetland Acreage Replacement | | | | | 93.4 | | | | |
| LP – Pending finalization of land protection | | | | | | | I – Restoration/Enhancement/Creation activities in progress | | |
| P – Planning / permitting | | | | | | | M – Mitigation monitoring | | |
| D – Pending delineation / assessment | | | | | | | CA – Corrective actions necessary | | |
| C – Closed | | | | | | | PC – Pending project closure | | |
| *Project includes stream or tidal wetland mitigation Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | |

As noted in Section II, the Fund has not been used to mitigate for any permitted stream impacts in the Upper James River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for the stream project pursued by the Conservancy to serve as mitigation for future impacts in the Upper James River Basin.

| Table 24: Stream Project Summary for the Upper James River Basin | | | | | |
|--|----------------|-----------------------------|--|--|-----------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| SH-3/ UJ-3 | C | 104.4 | 7,609 | Stream and riparian buffer preservation in the Shenandoah River Basin of 12,894 lf along both banks of Laurel Fork with a buffer ranging from 100-2,000 ft, 7,960 lf along both banks of Barkley Run with buffer widths ranging from 100-900 ft, 2,692 lf along one bank of Schoolhouse Run with buffer widths along the right bank of 100 feet and left bank of 35-100 ft, 2,569 lf along the left bank of Collins Run with a buffer width of 100 ft, and 6,108 lf along both banks of Blights Run with buffer widths on the right bank of 20-100 ft and left bank of 100 ft. Stream and riparian buffer preservation in the Upper James River Basin of 7,609 lf along both banks of Backs Creek and its tributaries with buffer width limited to the property boundary up to 100 ft. | reported under SH-3 |
| | Totals | 104.4 | 7,609 | | |
| Total Impacts (lf) | | 0 | | | |
| ac – acre | | lf – linear feet | | | |
| LP – Pending finalization of land protection | | | | I – Restoration/Enhancement/Creation activities in progress | |
| P – Planning / permitting | | | | M – Mitigation monitoring | |
| D – Pending delineation / assessment | | | | CA – Corrective actions necessary | |
| C – Closed | | | | PC – Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

| Table 25: Closed project Summary for the Upper James River Basin | | | | | | | | |
|--|---------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Activity | |
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| UJ-2 | 12/7/2006 | 7/10/2007 | 149,009 | 149,009 | 0 | 0 | 0 | 0 |
| UJ-3 | 11/19/2007 | 12/21/2009 | 0 | 0 | 0 | 0 | 7,609 | 0 |
| | | Totals | 149,009 | 149,009 | 0 | 0 | 7,609 | 0 |

Project Summaries

The following section provides a summary of each project located within the Upper James River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in earlier reports as indicated.

UJ-1 Warm Springs Mountain/Cowpasture River (Phillips)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland restoration and creation and upland buffer restoration at the Phillips property in Bath County. The restoration of the site was completed in the spring of 2008. The site design included the restoration of 3.09 acres of non-tidal wetlands, the enhancement of 1.78 acres of non-tidal wetlands and the restoration of 3.81 acres of upland forested buffer.

Wetlands restoration and creation is supported by groundwater seeps located in a former pasture. This is the second year of hydrology monitoring. Based upon the 2010 monitoring the wetlands restoration and enhancement areas are expected to meet the wetlands hydrology criterion during normal conditions. Two of three (2 of 3) monitoring wells located in the wetlands restoration and enhancement areas met the 12.5% criterion for saturation and inundation during the growing season. All wells in the targeted wetland areas exceeded saturation of inundation for a minimum of 10% of the growing season. All three of these wells met the 12.5% criterion during the 2009 growing season. Vegetation monitoring in 2009 and 2010 indicated the majority of the wetlands restoration and enhancement areas failed to achieve sufficient woody stem densities, indicating high mortality of trees planted in 2008. The failure of the plantings is attributable to herbivory and possible unsuitable conditions immediately following planting (e.g. seasonal drought and exposure of new plantings to excess heat and water stress). Corrective actions taken in November 2010, include re-planting wetland and upland restoration and enhancement areas with 2,400 tree seedlings. The re-planted portions of the site comprise approximately 8 acres, similar to the acreage planted in 2008. The plantings were protected from further herbivory and competition by the herbaceous community via use of tree shelters and tree matting. Success criteria for the herbaceous wetland community were not met in any of the eight vegetation monitoring plots. This was largely due to infestation by the moderately invasive species small carpgrass, *Arthraxon hispidus*. Nonetheless, a wide diversity of wetland plant species were observed in the wetland restoration and enhancement areas during the early growing season (June 2010). Additional monitoring of the early growing season plant community will occur in 2011 to further assess whether a hydrophytic vegetative community is present. Methods to eradicate the small carpgrass are not well-founded. Monitoring of the small carpgrass colonies and evaluation of available control methods, including use of chemical herbicides, will be completed in 2011. This is the second year of mitigation monitoring post construction. Mitigation monitoring is scheduled through 2018, with reports submitted to the Corps in 2011, 2013, 2015, and 2018.

UJ-2 Warm Springs Mountain/Cowpasture River Site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

SH-3 / UJ-3 Laurel Fork (Rifle Ridge Farm, LLC)

This project mitigates for stream impacts in both the Shenandoah and Upper James River Basins. Projects details are given under the SH-3 description.

New River Basin

The New River Basin is comprised of two HUCs (05050001 and 05050002). This basin is located within the Conservancy's Central Appalachian Ecoregion. Conservation targets include small, Central Appalachian streams and tributaries and general locations encompassing habitat for known Virginia Department of Conservation and Recreation Natural Heritage elements.

The Fund has been used to mitigate for 1.62 acres of non-tidal wetland impacts and 3,241 linear feet of stream impacts in the New River Basin. Through 2010, the Conservancy has not requested funds to pursue any mitigation project in this basin. A significant project has been identified and is expected to be developed into a funding proposal in 2011.

Potomac River Basin

The Potomac River Basin is comprised of three HUCs (02070008, 02070010, and 02070011) encompassing the Lower Potomac east of the Blue Ridge to the Bay. This basin is located within the Conservancy's Piedmont Ecoregion. Conservation targets include small Piedmont streams and tributaries, sportfish and nongame fish populations, and estuarine and riverine systems.

The projects discussed in this section serve as mitigation for permitted impacts within the Potomac River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates for 2010 are given for each project as applicable. No new projects were pursued in 2010.

The following table provides a summary of projects for which funds were approved in the Potomac River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 26: Approved Project Summary for the Potomac River Basin | | | | | | |
|--|---|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| PO-1 | Caledon (Nash) | M | 5/23/2001 | 175,000 | 0 | 0 |
| | | M | 12/19/2003 | 0 | 0 | 60,800 |
| PO-2 | Dogue Creek (Kingstowne) | M | 2/22/2007 | 0 | 0 | 12,000 |
| | | | 10/6/2006 | 0 | 0 | 1,222,000 |
| PO-3 | Goose Creek Site | M | 12/7/2006 | 0 | 0 | 1,406,703 |
| PO-4 | Goose Creek Site | A | 10/11/2006 | 3,250 | 0 | 3,250 |
| | | | 1/12/2007 | 750 | 0 | 750 |
| PO-5 | Goose Creek (Bluewildlife, LLC) | M | 7/27/2007 | 256,820 | 0 | 1,644,752 |
| | | | 2/17/2009 | 0 | 0 | 24,725.00 |
| PO-6 | Crow's Nest (Stafford Lakes Partnership, Phase I) | M | 2/8/2008 | 800,000 | 38,000 | 2,262,000 |
| PO-7 | Crow's Nest Phase II | M | 2/8/2008 | 0 | 0 | 1,400,000 |
| | | | Totals | 1,235,820 | 38,000 | 8,036,980 |
| | | | Grand Total | 9,310,800 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Potomac River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 27: Non-Tidal Wetland Project Summary for the Potomac River Basin | | | | | | | | |
|--|--------|-----------------|---|-------------|--------------|---------------|------------------|------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | |
| *PO-1 | M,D,CA | 9.31 | 50 | 0.00 | 27.07 | 66.38 | 152.76 | 19.43 |
| *PO-5 | M | 4.71 | 0 | 1.41 | 0 | 0 | 6.12 | 5.18 |
| *PO-6 | C | 0.00 | 385 | 0.00 | 0 | 144 | 529.00 | 45.70 |
| *PO-7 | C | 0.00 | 60 | 0.00 | 0 | 64 | 124.00 | 9.20 |
| Sub-totals | | 14.02 | 495.00 | 1.41 | 27.07 | 274.38 | 811.88 | 79.51 |
| Total Acres of Non-Tidal Impacts | | | | | 8.78 | | | |
| Total Mitigation Liability | | | | | 13.64 | | | |
| Total Proposed Credits | | | | | 79.51 | | | |
| Percent of Wetland Acreage Replacement | | | | | 159.7 | | | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | | | | |
| C - Closed | | | PC - Pending project closure | | | | | |
| *Project includes stream or tidal wetland mitigation | | | | | | | | |

| Table 28: Tidal Wetland Project Summary for the Potomac River Basin | | | | | | | | |
|--|--------|--------------------|------------|---|-------------|----------|------------------|-------------------|
| Project Information | | Tidal Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Completed Credits |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | |
| *PO-6 | C | 0 | 108 | 0 | 0 | 0 | 108 | 8.96 |
| *PO-7 | C | 0 | 9 | 0 | 0 | 0 | 9 | 0.75 |
| Sub-totals | | 0 | 117 | 0 | 0 | 0 | 117 | 9.71 |
| Total Acres of Tidal Impacts | | | | | 0.11 | | | |
| Total Mitigation Liability | | | | | 0.11 | | | |
| Total Proposed/Completed Credits | | | | | 9.71 | | | |
| Percent of Wetland Acreage Replacement | | | | | 0.0 | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | |
| C - Closed | | | | PC - Pending project closure | | | | |
| *Project includes stream or tidal wetland mitigation | | | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 76,813 linear feet of

permitted stream impacts both prior to and under the USM in the Potomac River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Potomac River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. All stream projects initiated through 2010 have been with funds accrued prior to implementation of the USM.

| Table 29: Stream Project Summary for the Potomac River Basin | | | | | |
|--|----------------|--|--|---|-----------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| PO-1* | M | 7.24 | 1,600 | Priority 1 relocation of 300 lf and Priority 2 restoration of 650 lf of an unnamed tributary to Chotank Creek with a wooded buffer ranging from 50 to over 200 feet along each bank. Livestock exclusion fencing installed to protect 1,600 lf of stream channel and a small pond. | 0 |
| PO-2 | I | 5.2 | 1,985 | Priority 1 restoration of 1,985 lf along two unnamed tributaries to Dogue Creek with wooded buffer ranging from 50 to 150 feet along each bank. | 0 |
| PO-3 | LP, D, P | 28 | 6,877 | Channel restoration and enhancement activities along 6,877 lf of several unnamed tributaries to Crooked Run. Additionally, riparian buffer planting 100 feet wide along 5,182 lf of both banks, except for an 80 foot wide buffer along the right bank for 1,118 lf and a 20 foot wide buffer along the left bank for 146 lf. Riparian buffer planting 80 feet wide along a single bank for 1,695 lf. Livestock exclusion fencing installed to protect 6,877 lf of channel. | 0 |
| PO-5 | M | 22.55 | 7,243 | Channel restoration/enhancement and riparian buffer restoration along 4,712 lf of Bolling Branch and 2,531 lf along four unnamed tributaries. Stream and buffer preservation on 100 lf of an unnamed tributary. | 77 |
| PO-6 | PC | 306 | 79,445 | Stream system preservation along both banks of 53,175 lf of twelve unnamed tributaries to Accokeek and Potomac Creeks with an existing mature wooded buffer. Riparian buffer preservation along 26,270 lf of one bank of Accokeek and Potomac Creeks with an existing mature wooded buffer. | 737 |
| PO-7 | LP | 238 | 30,797 | Stream system preservation along both banks of 22,863 lf of five unnamed tributaries to Accokeek and Potomac Creeks with an existing mature wooded buffer. Riparian buffer preservation along 7,934 lf of one bank of Accokeek and Potomac Creeks with an existing mature wooded buffer. | 746 |
| Totals | | 606.99 | 127,947 | | 1,560 |
| Total Impacts (lf) | | 76,813 | | | |
| ac - acre | | lf - linear feet *Project includes wetland mitigation | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

| Table 30: Closed Project Summary for the Potomac River Basin | | | | | | | | |
|---|---------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Activity | |
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| PO-4 | 10/10/2006 | 11/16/2007 | 8,000 | 0 | 0 | 0 | 0 | 0 |
| PO-6 | 2/8/2008 | 3/16/2009 | 3,100,000 | 0 | 39.28 | 8.96 | 79,445 | 0 |
| PO-7 | 2/8/2008 | 12/22/2009 | 1,400,000 | 975 | 7.44 | 0.75 | 30797 | 0 |
| | | Totals | 4,508,000 | 975 | 46.7 | 9.7 | 110,242 | 0 |

Project Summaries

The following section provides a summary of each project located within the Potomac River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in earlier reports as indicated below.

PO-1 Caledon (Nash)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland restoration and preservation, upland buffer restoration and preservation, stream restoration, and livestock exclusion activities at the Nash property in King George County. The Conservancy proposed to reverse the existing ditching effects and restore the forest cover in the pastureland at the property and to restore the proper dimension, pattern, and profile to the degraded segment of an unnamed tributary to Chotank Creek. The stream portion of this project was closed in 2007. Please reference the 2007 Annual Report for details on this project.

The goal of the wetland mitigation activities is to restore the livestock pasture area to a mixture of forested wetlands (10 acres) and upland buffer (26 acres) and to preserve approximately 50 acres of forested wetland 66 acres of upland. Restoration work was completed in 2003 and the site was planted in 2004. Results from hydrological monitoring in 2008, 2009 and 2010 indicate that the site is experiencing saturation and inundation sufficient to meet hydrology standards. All monitoring wells exhibited continuous saturation or inundation in the upper part of the soil for greater than 12.5% of the 2009 growing season. Hydrologic monitoring in 2010 indicated that the success criteria for wetlands hydrology was met in 3/5 (60%) of the monitoring wells. While the 12.5% saturation hydrology criterion was not met in 2 of the 5 monitoring wells, these wells satisfied the wetlands hydrology criterion when monitored in 2009. Precipitation amounts generally decreased to below-average in the three months preceding the 2010 growing season (February, March, and April), indicating “dry” conditions at the on-set of the growing season. All monitoring wells are expected to meet the 12.5% standard during normal conditions.

2010 vegetation monitoring data indicated that weed species such as blackberry (*Rubus* spp.), multiflora rose (*Rosa multiflora*), and Nepalese browntop (*Microstegium vimineum*) are present on the site. The Conservancy will continue to monitor these potentially

problematic species and will implement corrective action if it is needed. 2010 monitoring showed the woody vegetation standard of >400 stems per acre is met by 6 of the 10 (60%) monitoring plots, though plots exhibiting low stem densities are generally located outside of the 9.31-acre portion of the site for which compensatory mitigation credit has been requested.

Corrective action in 2010 entailed replanting of wetland sapling and shrub species in restoration areas where the 400 stems per acre success criterion was not met. An approximately 5-acre portion of the former pastureland, which did not meet criteria for establishment of successful hydrophytic forest community were planted with hydrophytic tree species at a density of 400 stems per acre in November 2010. Additional monitoring plots will be established for the approximately 5-acre area. Based on the results of monitoring in 2013, additional release of mitigation credits will likely be requested for the re-planted area. This site is on a post construction and mitigation monitoring plan that extends through 2013 with reports submitted to the Corps in 2013.

PO-2 Dogue Creek (Kingstowne)

Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities at a property in Fairfax County. Stream restoration construction began in early December 2010, and is expected to be completed in early 2011. Mitigation activities entail restoration of 1,985 linear feet of tributaries to Dogue Creek and invasive species control and planting along the stream banks and riparian buffer. Invasive species control and planting will also be conducted in early 2011. The landowner placed 5.2 acres under deed restriction in 2009, which consists of a “no-touch” stream and riparian buffer corridor. Long-term protection of the property is accomplished through this deed restriction. The Year 1 monitoring of the stream and buffer is scheduled to be completed in 2011.

PO-3 Goose Creek Site

Please reference the 2007 Annual Report for details on this project.

The purpose of this project is to conduct stream restoration, enhancement, and livestock exclusion activities at a property in Loudoun County. The Conservancy proposed to install livestock exclusion fencing and conduct restoration and enhancement activities along approximately 6,877 linear feet of several unnamed tributaries to Crooked Run. The landowners will donate a conservation easement over an approximate 80 to 100 foot wide “no-touch” riparian area along each bank of the tributaries on the subject property (total of 28 acres). This easement will be held by the Conservancy. Long-term protection of the property will be accomplished through the monitoring and enforcement of the easement by the Conservancy. The schedule for the stream monitoring and reporting events will be finalized through the permitting process.

The Conservancy anticipates the easement will be finalized in 2011. Once the easement is signed, the Conservancy will finalize the planning process to implement this project.

PO-4 Goose Creek Site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

PO-5 Goose Creek (Bluewildlife, LLC)

Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland enhancement and creation and stream restoration, enhancement and preservation activities at the Bluewildlife property in Fauquier County.

The stream channel and wetland restoration activities were completed in spring 2009. The as-built survey indicated that the project generated 4.71 acres of non-tidal wetland restoration/creation, 1.41 acres of non-tidal wetland enhancement, for a total of 5.17 non-tidal wetland credits. The project also generated 7,243 linear feet of stream restoration/enhancement and 22.55 acres of riparian buffer restoration.

2010 marked the second year for wetland, stream, and buffer monitoring of the site. The results of the 2010 wetland hydrological monitoring indicate that all wells are meeting the hydrology criteria. Herbaceous, percent FAC or wetter, and Prevalence Index values reflect that the site is also meeting the wetland vegetation criteria. Although all areas reflect average stem densities above 400 stems per acre, supplemental wetland vegetation planting will occur in spring 2011 in areas where values dropped below the criterion to ensure continued success.

The results of the 2010 stream monitoring indicate that all stream stability and geomorphic metrics meet or exceed the success criteria for Bolling Branch and tributaries. All vegetation metrics also meet or exceed the success criteria with the exception of woody stem density in four riparian buffer monitoring plots and two live stakes plots. Supplemental planting will be conducted in these areas in spring 2011 to ensure future success.

Isolated areas of small carpgrass (*Arthraxon hispidus*) and Microstegium (*Microstegium vimineum*) were noted in portions of the wetlands, riparian buffer, and stream banks during the 2010 monitoring. Traces of multiflora rose (*Rosa multiflora*) were found in two stream buffer plots. The Conservancy will monitor these potentially problematic species and will implement corrective action if it is needed.

Based on the results of the 2009 monitoring activities, supplemental planting occurred in early 2010 in areas that did not meet stem density requirements. Invasive species treatment was also conducted in 2010, with particular focus on thistle (*Cirsium vulgare*), cattail (*Typha latifolia*), and reed canary grass (*Phalaris arundinacea*). Minor maintenance activities (bank grading and outlet structure stabilization) were also completed in late October 2010.

2011 will be the third year post construction, and wetland and stream mitigation monitoring is scheduled through 2018 with reports submitted to the Corps.

PO-6 Crow’s Nest (Stafford Lakes Partnership, Phase I)

This project was officially closed in 2009. Please reference the 2008 and 2009 Annual Reports for details on this project.

PO-7 Crow’s Nest Phase II

This project was officially closed in 2009. Please reference the 2008 and 2009 Annual Reports for details on this project.

Rappahannock River Basin

The Rappahannock River Basin is comprised of two HUCs (02080103 and 02080104) encompassing the headwaters of the Rappahannock and Rapidan rivers east to the Chesapeake Bay. This basin is located within both the Conservancy’s Piedmont and Chesapeake Bay Lowlands ecoregions. Conservation targets include small, Blue Ridge foothill streams and inner Piedmont streams, tributaries, and rivers, anadromous fishes, freshwater mussels, seepage wetlands, tidal freshwater system, migratory land birds and raptors, Coastal Plain mixed pine-hardwood forest matrix, Piedmont forest matrix, and calcareous forest.

The projects discussed in this section serve as mitigation for permitted impacts within the Rappahannock River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. No new projects were approved in 2010. Complete project descriptions for projects approved prior to 2010 may be found in the 2009 Annual Report. Updates are given for each project as applicable.

The following table provides a summary of projects for which funds were approved in the Rappahannock River Basin.

| Table 31: Approved Project Summary for the Rappahannock River Basin | | | | | | |
|--|--|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| RP-1 | Rappahannock Phragmites Control | M | 4/11/2001 | 0 | 10,000 | 0 |
| RP-2 | Linden Farm | M | 7/30/2002 | 0 | 0 | 61,894 |
| RP-3 | Rappahannock River Fish Passage | M | 12/5/2002 | 0 | 0 | 39,700 |
| RP-4 | Upper Rappahannock (City of Fredericksburg) | M | 6/30/2003 | 0 | 0 | 1,100,000 |
| | | M | 5/23/2005 | 0 | 0 | 206,275 |
| | | M | 7/27/2006 | 0 | 0 | 654,665 |
| | | M | 2/22/2007 | 0 | 0 | 56,479 |
| | | M | 5/7/2008 | 0 | 0 | 300,275 |
| RP-5 | Rappahannock River (Wellford) | M | 4/21/2005 | 14,000 | 0 | 0 |
| | | | 8/28/2008 | 3,700 | 0 | 0 |
| RP-6 | Rapidan River Site | A | 9/9/2005 | 6,500 | 0 | 0 |
| RP-7 | Upper Rappahannock Forest Block site | M | 2/22/2007 | 114,816 | 0 | 0 |
| RP-8 | Upper Rappahannock Forest Block (Collawn, R.) | M | 2/22/2007 | 121,316 | 0 | 0 |
| | | M | 8/28/2008 | 1,945 | 0 | 0 |
| RP-9 | Rappahannock River (Rose) | M | 8/10/2007 | 81,000 | 0 | 0 |
| RP-10 | Rappahannock River (Rose II) | M | 2/8/2008 | 75,000 | 0 | 0 |
| | | M | 8/28/2008 | 500 | 0 | 0 |
| RP-11 | Mountain Run (EBX) | M | 2/8/2008 | 869,400 | 0 | 0 |
| | | M | 4/3/2008 | 29,941 | 0 | 0 |
| RP-12 | Rappahannock River (Norman's Ford – Jamie Craig) | M | 2/25/2008 | 150,000 | 0 | 0 |
| RP-13 | Rappahannock River site | M | 6/16/2008 | 250,000 | 0 | 129,545 |
| | | M | 8/5/2008 | 27,818 | 0 | 27,818 |
| | | | Totals | 1,745,936 | 10,000 | 2,576,651 |
| | | | Grand Total | 4,332,587 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

Table 32: Closed Project Summary for the Rappahannock River Basin

| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Wetland Credits | Stream Activity | |
|---------------|---------------------|--------------------|----------------------|-------------------------|-----------------|--------------------------|--------------------------|
| | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| RP-1 | 4/11/2001 | 8/14/2007 | 10,000 | 0 | 1.6 | N/A | N/A |
| RP-2 | 7/30/2002 | 7/27/2007 | 61,894 | 6,961.74 | N/A | 2,000 | 7,742 |
| | | 8/5/2008 | | | | | |
| RP-3 | 12/5/2002 | 7/27/2007 | 39,700 | 0 | N/A | N/A | N/A |
| RP-6 | 9/9/2005 | 7/27/2007 | 6,500 | 3,500 | N/A | N/A | N/A |
| RP-7 | 2/22/07 | 2/17/2009 | 114,816 | 114,816 | N/A | N/A | N/A |
| RP-8 | 2/22/07 8/28/08 | 11/29/2009 | 123,261 | 1,500 | 1.56 | N/A | N/A |
| RP-9 | 8/10/07 | 12/21/2009 | 81,000 | 2,990 | 1.2 | N/A | N/A |
| RP-10 | 2/8/08 | 12/21/2009 | 75,500 | 260 | 2.85 | N/A | N/A |
| RP-12 | 2/25/2008 | 12/16/2008 | 150,000 | 0 | 2.92 | N/A | N/A |
| Totals | | | 662,671 | 130,028 | 10.13 | 2,000 | 7,742 |

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Rappahannock River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 33: Non-Tidal Wetland Project Summary for the Rappahannock Basin

| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed Credits | Additional Protected Acreage (ac) |
|---|--------|-----------------|--------------|-------------|--------------|--------------|---|------------------|-------------------|-----------------------------------|
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | | |
| RP-5 | D,PC | 0 | 0.6 | 0 | 0 | 17.4 | 18 | 1.72 | N/A | 0 |
| RP-8 | C | 0 | 11.49 | 0 | 0 | 8.31 | 19.8 | N/A | 1.56 | 56.3 |
| RP-9 | C | 0 | 7.6 | 0 | 0 | 14 | 21.6 | N/A | 1.20 | 53 |
| RP-10 | C | 0 | 7.3 | 0 | 0 | 25.5 | 32.8 | N/A | 2.85 | 55 |
| RP-11 | M | 17.25 | 4.58 | 0.82 | 5.5 | 2.48 | 30.63 | 18.47 | N/A | 0 |
| RP-12 | C | 2.92 | 0 | 0 | 0 | 0 | 2.92 | N/A | 2.92 | 0 |
| RP-13 | LP | 23 | 0 | 0 | 19.0 | 0 | 42 | 24.27 | N/A | 137 |
| Sub-totals | | 43.17 | 31.57 | 0.82 | 24.5 | 67.69 | 167.75 | 43.67 | 8.53 | 301.30 |
| Total Acres of Non-Tidal Impacts | | | | | 10.21 | | | | | |
| Total Mitigation Liability | | | | | 19.28 | | | | | |
| Total Proposed/Completed Credits | | | | | 52.2 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | 422.8 | | | | | |
| LP - Pending finalization of land protection D - Pending delineation / assessment PC - Pending project closure P - Planning / permitting | | | | | | | I – Restoration/ /Enhancement in progress CA - Corrective actions necessary M - Mitigation monitoring | | | |
| | | | | | | | C – Closed | | | |

| Table 34: Tidal Wetland Project Summary for the Rappahannock River Basin | | | | | | | |
|--|--------|-------|-------|---|---------------|------------|-----------|
| Project Information | | Tidal | Tidal | Tidal | Upland Buffer | Mitigation | Completed |
| Project ID | Status | Rest | Enh | Pres | Pres | Acres | Credits |
| RP-1 | C | 0 | 80 | 0 | 0 | 80 | 1.6 |
| Acre Sub-totals | | 0 | 80 | 0 | 0 | 80 | 1.6 |
| Credit Sub-totals | | 0 | 1.6 | 0 | 0 | | |
| Total Acres of Tidal Impacts | | | | | 0 | | |
| Total Mitigation Liability | | | | | 0 | | |
| Total Proposed Credits | | | | | 1.6 | | |
| Percent of Wetland Acreage Replacement | | | | | N/A | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | |
| C - Closed | | | | PC - Pending project closure | | | |

As noted in Section II, the Fund has been used to mitigate for 15,862 linear feet of permitted stream impacts in the Rappahannock River Basin through 2010. The following tables summarize the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Rappahannock River Basin.

| Table 35: USM Stream Impacts and Mitigation Summary for the Rappahannock River Basin | | | | | | | | | |
|--|--------|----------------------|--------|---|--------------------|------|-----------------|---------------------------|-----------------------|
| Project Information | | Stream Activity (lf) | | | Upland Buffer (ac) | | Mitigation (ac) | Total Channel Length (lf) | Proposed Credits (CC) |
| Project ID | Status | Rest/Enh | Pres | Livestock Exclusion | Rest | Pres | | | |
| RP-4* | D | 0 | 39,559 | 0 | 0 | 163 | 163 | 39,559 | 7,167 |
| RP-13* | LP | 0 | 3,900 | 0 | 0 | 33 | 33 | 3,900 | 648 |
| Sub-totals | | 0 | 43,459 | 0 | 0 | 196 | 196 | 43,459 | 7,815 |
| Total Linear feet of Impacts (lf) | | | | | 5,091 | | | | |
| Total Compensation Required (TCR) | | | | | 5,256 | | | | |
| Total Proposed Credits (CC) | | | | | 7,815 | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | |
| C - Closed | | | | PC - Pending project closure | | | | | |
| *Project includes pre-USM and USM funding | | | | | | | | | |

| Table 36: Pre-USM Stream Project Summary for the Rappahannock River Basin | | | | | |
|--|-----------------------|------------------------------------|---|---|-------------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage |
| RP-2 | C | 28 | 7,742 | Riparian buffer planting (approximately 100 to 300 feet wide) along both banks of 2,000 lf of stream channel. Livestock exclusion fencing installed to protect 7,742 lf of unnamed tributaries to Mountain Run and a pond. | 0 |
| RP-3 | C | NA | NA | Installed an Alaskan steep-pass structure in White Oak Run to allow the migration of anadromous fishes. | NA |
| RP-4+ | D, PC | 1090.45 | 264,738 | Riparian buffer preservation of 59,712 linear feet along both banks and 33,887 lf along one bank of the Rappahannock River. Riparian buffer preservation of 32,290 lf along both banks and 20,591 lf along one bank of the Rapidan River. Riparian buffer preservation along 118,259 lf of both banks of unnamed tributaries to the two rivers. Protected buffers are 100 foot wide predominantly mature woodlands. Funding for this project is both pre-USM and USM. | 2,978.62 |
| | Totals | 1,118.45 | 272,480 | | 2,978.62 |
| Total Impacts (lf) | | 10,771.00 | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Project Summaries

The following section provides a detailed summary of each project located within the Rappahannock River Basin for which the Corps authorized funds during 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

RP-1 Rappahannock River Phragmites Control

This project was closed in 2007. Please reference the 2007 Annual Report for project details.

RP-2 Linden Farm

This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

RP-3 Rappahannock River Fish Passage

This project was officially closed on July 27, 2007. Details about this project can be found in the 2007 Annual Report.

RP-4 Upper Rappahannock (City of Fredericksburg)

The purpose of this project is to conduct stream and the associated upland riparian buffer preservation along a significant length of the Rappahannock and Rapidan Rivers (and associated tributaries) on a property owned by the City of Fredericksburg. The initial funding for this project was approved by the Corps on June 30, 2003, with three subsequent approvals on May 23, 2005, July 27, 2006, and February 22, 2007. In 2008, the Conservancy requested additional funds to complete a boundary survey of the property. The Conservancy and partners purchased a conservation easement on approximately 4,232 acres along the two major rivers. The Conservancy, the Virginia Outdoors Foundation, and the Virginia Department of Game and Inland Fisheries co-hold the easement. Long-term protection of the site will be achieved through the monitoring and enforcement of the easement. No additional monitoring is required for this project.

The Conservancy anticipates closing this project following completion of the boundary survey and surface water delineation or assessment in 2011.

RP-5 Rappahannock River (Wellford)

The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Wellford Farms property in Richmond County. The funding for this project was approved by the Corps on April 21, 2005. Subsequent funding was approved on August 28, 2008. The Conservancy proposed to buy the timber rights for an 18-acre portion of the property including wetlands and upland buffer. The property was placed under easement on April 5 2005, which is held and monitored by the Virginia Outdoors Foundation (VOF). Long-term protection of this site is achieved through the monitoring and enforcement of this easement by VOF. No additional monitoring is required for this project.

The Conservancy negotiated purchase of a conservation easement to extinguish the timber rights on 18.0 acres containing approximately 16.4 acres of forested wetlands and 1.6 acres of upland buffers on the property. A wetland delineation of the mitigation area was completed in 2008, showing a marked difference from what was proposed, though showing potential for restoration. The Conservancy will investigate the full potential for restoration before proceeding further with this project.

RP-6 Rapidan River Site

This project was officially closed on July 27, 2007. Details about this project can be found in the 2007 Annual Report.

RP-7 Upper Rappahannock Forest Block site

This project was officially closed in 2009. Details about this project can be found in the 2009 Annual Report.

RP-8 Upper Rappahannock Forest Block (Collawn, R.)

This project was officially closed in 2009. Please reference the 2009 Annual Report for details on this site.

RP-9 Rappahannock River (Rose)

This project was officially closed in 2009. Please reference the 2009 Annual Report for details on this site.

RP-10 Rappahannock River (Rose II)

This project was officially closed in 2009. Please reference the 2009 Annual Report for details on this site.

RP-11 Mountain Run (EBX)

The purpose of this project is to conduct a non-tidal wetland restoration and creation, wetland enhancement and preservation and upland buffer restoration, enhancement and preservation adjacent to Mountain Run in Orange County. Reference the 2008 Annual Report for additional background information on this site.

Construction of the wetlands mitigation project was completed in April 2009. Monitoring in 2010 showed three of seven (3 of 7) shallow groundwater monitoring wells met the wetland hydrology requirement (minimum 25 consecutive day period of soil saturation in the upper part of the soil). Four of seven (4 of 7) wells achieved continuous surface soil saturation for at least 18 consecutive days. A severe drought during the 2010 growing season produced shorter hydroperiods during the 2010 growing season. Nonetheless, achievement of wetland hydrology in all of the wetland cells during a year of normal precipitation is anticipated.

All restoration and creation areas exceeded minimum requirements for wetland vegetation dominance, however, a portion of the site did not exhibit a minimum woody stem density of 400 stems per acre. Plant survival rates were reduced within these areas due to dense herbaceous vegetation competition upon woody stems. However, volunteer native woody plants are anticipated to actively propagate based on the establishment of volunteer woody species from natural seeding. Supplemental plantings are scheduled to be implemented during the 2011 dormant season. This project is being managed through a full delivery contract. Invasive species were detected in varying coverage amounts. General recommendations for controlling invasive species and enhancing the planted woody stems' ability to propagate include systematic spraying of the herbaceous and invasive vegetation in problem areas. Continued monitoring of vegetation will determine the extent and frequency of spraying. All aspects of the project through the monitoring and delivery of credits will be handled under this contract. 2010 is the second year post construction and mitigation monitoring is scheduled through 2018, with reports submitted to the Corps in 2011, 2013, 2015, and 2018.

RP-12 Rappahannock River (Norman's Ford – Jamie Craig)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

RP-13 Rappahannock River site

The purpose of this project is to acquire a conservation easement and complete a wetland and stream mitigation project on a tract in Essex County, Virginia. Funding for this project was approved by the Corps on June 16, 2008 and August 5, 2008. Based upon preliminary information and assessment of the property, wetland restoration activities will be conducted on approximately 24 to 40 acres with an additional 18 to 20 acres of forested buffer created in the adjacent uplands. In addition, approximately 33 acres will be preserved to protect the existing riparian buffer along 3,900 lf of tributaries to the Rappahannock River. Long term protection of the site will be achieved through a conservation easement. Additional details regarding the background information of this site can be found in the 2008 Annual Report. The Conservancy is currently negotiating the terms of the mitigation project and conservation easement with the landowner.

Roanoke River Basin

The Roanoke River Basin is comprised of seven HUCs (03010101, 03010102, 03010103, 03010104, 03010105, 03010106 and 0304010) encompassing the Roanoke headwaters and the Dan River draining south into North Carolina. This basin is located within both the Conservancy's Piedmont and Central Appalachian Forest ecoregions. Conservation targets include Ridge and Valley rivers, calcareous seeps/fens, basic mesic forests, acidic oak pine forests, calcareous woodlands/forests, and warm water fish communities including orange fin madtom, Roanoke hogsucker, bigeye jumprock, Roanoke logperch and riverweed darter.

The projects discussed in this section serve as mitigation for permitted impacts within the Roanoke River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. No new projects were proposed in 2010, though additional funding for one project was approved. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates are given for 2010 for each project as applicable. Complete descriptions of projects approved during 2010 are provided below.

The following table provides a summary of projects for which funds were approved in the Roanoke River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 37: Approved Project Summary for the Roanoke River Basin | | | | | | |
|--|--|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| RO-1 | Apple Orchard Mountain (Edwards) | M | 6/7/2005 | 0 | 0 | 180,000 |
| RO-2 | Apple Orchard Mountain (City of Bedford) | M | 6/7/2005 | 0 | 0 | 15,000 |
| | | M | 2/7/2006 | 0 | 0 | 8,250 |
| RO-3 | Goose Creek-Roanoke (Bedford County) | F | 2/22/2007 | 10,075 | 0 | 10,075 |
| | | C | 2/8/2008 | 9,000 | 0 | 0 |
| | | M | 12/16/2008 | 231,000 | 0 | 469,000 |
| | | M | 3/16/2009 | 10,000.00 | 0.00 | 17,000.00 |
| RO-4 | Turkeycock Mountain (Grassy Fork site) | A | 2/8/2008 | 1,500 | 0 | 1,500 |
| RO-5 | Poor Mountain (Sanzone) | M | 11/2/2008 | 0 | 0 | 45,000 |
| RO-6* | Roanoke Headwaters (Blake) | M | 9/28/2009 | 0 | 0 | 45,000 |
| | | M | 8/11/2010 | 0 | 0 | 11,000 |
| | | | Totals | 261,575 | 0 | 801,825 |
| | | | Grand Total | 1,063,400 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |
| *Denotes use of USM funds | | | | | | |

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Roanoke River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or conceptual plan development.

| Table 38: Non-Tidal Wetland Project Summary for the Roanoke River Basin | | | | | | | | | |
|--|---------------|------------------------|---|-------------|--------------------|--------------|-------------------------|-------------------------|--|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Additional Protected Acres (ac) |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | |
| RO-3 | P | 4.15 | 1.88 | 1.16 | 4.67 | 1.7 | 13.56 | 5.12 | 0 |
| Sub-totals | | 4.15 | 1.88 | 1.16 | 4.67 | 1.7 | 13.56 | 5.12 | 0 |
| | | | | | | | | | |
| Total Acres of Non-tidal Impacts | | | | | | 5.65 | | | |
| Total Mitigation Liability | | | | | | 9.6 | | | |
| Total Proposed Credits | | | | | | 5.12 | | | |
| Percent of Wetland Acreage Replacement | | | | | | 73.45 | | | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | | | | | |
| P - Planning / permitting | | | M - Mitigation monitoring | | | | | | |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | | | | | |
| C - Closed | | | PC - Pending project closure | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 7,562 linear feet of permitted stream impacts in the Roanoke River Basin through 2010, both before and after implementation of the USM. The following tables summarize the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Roanoke River Basin. These tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. One project utilizes USM funds.

| Table 39: USM Stream Impacts and Mitigation Summary for the Roanoke River Basin | | | | | | | | | |
|--|---------------|-----------------------------|--------------|---|---------------------------|--------------|------------------------|----------------------------------|-------------------------|
| Project Information | | Stream Activity (lf) | | | Upland Buffer (Ac) | | Mitigation (ac) | Additional Protected (ac) | Proposed Credits |
| Project ID | Status | Rest/Enh | Pres | Livestock | Rest | Pres | | | |
| RO-6 | P | 1,903 | 2,926 | 0 | 11.5 | 168.3 | 179.8 | 45.4 | 1,614 |
| Totals | | 1,903 | 2,926 | 0 | 11.5 | 168.3 | 179.8 | 45.4 | 1,614 |
| | | | | | | | | | |
| Total Linear Feet of Impacts (lf) | | | | | 2,927 | | | | |
| Total Compensation Required (TCR) | | | | | 2,455 | | | | |
| Total Proposed Credits (CC) | | | | | 1,614 | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | |
| C - Closed | | | | PC - Pending project closure | | | | | |
| *Project includes pre-USM and USM funding | | | | | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | |

| Table 40: Pre-USM Stream Project Summary for the Roanoke River Basin | | | | | |
|--|----------------|-----------------------------|--|---|-----------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| RO-1 | C | 36.5 | 5,220 | Riparian buffer preservation along 2,379 lf of the right bank of Little Stony Creek with an existing mature wooded buffer width of 200 feet. Within this reach, riparian buffer preservation along 659 lf of the left bank with an existing mature wooded buffer width of primarily 125 feet. Stream system preservation along both banks of 2,841 lf of three unnamed tributaries to Little Stony Creek with an existing mature wooded buffer width of 200 feet (except for several areas of a minimum 125 foot buffer). | 16.5 |
| RO-2 | C | 3.96 | 788 | Riparian buffer preservation along 788 lf of the right bank of Little Stony Creek with an existing mature wooded buffer width of 200 feet. Within this reach, riparian buffer preservation along 300 lf of the left bank with an existing mature wooded buffer width of 50 feet. | 9.79 |
| *RO-3 | I | 15.7 | 3,215 | Stream restoration along 2,295 lf of the South Fork of the Goose Creek, stream enhancement along 920 lf of the South Fork of the Goose Creek, and riparian buffer restoration and preservation along the entire project length. | N/A |
| RO-5 | I | 116 | 14,700 | Riparian buffer preservation along both banks of 12,800 lf of Dry Branch and tributaries, with forested buffer along both banks Riparian buffer preservation along one bank of 1,900 lf of Dry Branch. Invasive species removal and reforestation along 800 lf of Dry Branch. | 394 |
| Totals | | 172.16 | 23,923 | | 420.29 |
| Total Impacts (lf) | | 4,635 | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Table 41: Closed Project Summary for the Roanoke River Basin

| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Activity | |
|------------|---------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------------|--------------------------|
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| RO-1 | 6/7/2005 | 8/5/2008 | 180,000 | 174,251.70 | 0 | 0 | 5,220 | 0 |
| RO-2 | 6/7/2005 | 8/5/2008 | 22,250 | 20,379.04 | 0 | 0 | 788 | 0 |
| | | Totals | 202,250 | 194,631 | 0 | 0 | 6,008 | 0 |

Project Summaries

The following section provides a summary of each project located within the Roanoke River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in earlier reports as indicated below.

RO-1 Apple Orchard Mountain (Edwards)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

RO-2 Apple Orchard Mountain (City of Bedford)

This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

RO-3 Goose Creek-Roanoke (Bedford County)

Please reference the 2008 Annual Report for additional background details on this project.

The purpose of this project is to conduct non-tidal wetland and stream restoration at Montvale Park in Bedford County. The area of interest for this mitigation project is approximately 33 acres and includes approximately 2,345 linear feet of South Fork Goose Creek, its adjacent floodplain and a steep bluff to the south that is forested and contains one small tributary to South Fork Goose Creek. These areas contain a mixture of wetland, converted wetland and upland. Sections of the South Fork of Goose Creek have an established forested buffer, while other sections have either no or minimal wooded buffer. The landowners donated a conservation easement on the site to the Western Virginia Land Trust and the Nature Conservancy in 2009, which provides long-term protection of the property.

The stream and wetland restoration construction was completed in August 2010. Soon after construction completion, the restored stream suffered damage following a storm in September 2010. The Conservancy is currently working to ensure the site is repaired as soon as possible.

RO-4 Turkeycock Mountain (Grassy Fork site)

Please reference the 2008 Annual Report for background information on this project.

The purpose of this project is to conduct stream preservation on an approximately 350-acre property in Franklin County. The property encompasses approximately two miles of Grassy Fork and an unnamed tributary to Crab Creek. The property appraisal was completed in 2008 and negotiations have not progressed with the landowner. The Conservancy anticipates closing this project in 2011.

RO-5 Poor Mountain (Sanzone)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct a stream and riparian buffer preservation and enhancement project on Dry Branch, a tributary of the Roanoke River, in Roanoke County, Virginia. The project seeks to accomplish preservation of approximately 13,200 linear feet of both banks of 1st and 2nd order tributaries to the Roanoke River and 1,500 linear feet of one bank of a tributary. The Conservancy has also proposed the enhancement of 2 acres of riparian buffer along 800 linear feet of one bank of Dry Branch through removal of existing tree-of-heaven (*Ailanthus altissima*) trees and replanting with native trees and shrubs.

The initial tree-of-heaven removal was completed in early 2009. Due to rocky site conditions, the Conservancy conducted direct seeding of native trees in the enhancement area in early 2010. An inspection in summer 2010 found that much of the seeded area was overgrown with *Microstegium*, and that only a small population of native stems had become established following seeding. It is believed that seedling establishment and growth would have been sufficient if *Microstegium* had not been present. In early 2011, the Conservancy will treat the *Microstegium* with a pre-emergent herbicide in order to prevent any further interference with the young hardwoods. The entire portion of the site that is without sufficient native tree cover (~1.5 acres) will be replanted with a mixture of native seeds and seedlings in early 2011. This additional planting will serve to augment the population of hardwood seedlings. The planted seedlings will be released from competition, either by mowing or spot application of an herbicide. If needed, the area will be treated again with pre-emergent herbicide in early 2012. The Year 1 monitoring of the buffer enhancement area will be conducted in 2011.

RO-6 Roanoke Headwaters (Blake)

Please reference the 2009 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream system preservation and riparian buffer enhancement on Mill Creek in the Roanoke Headwaters in Montgomery County, Virginia. The initial funding for this project was approved by the Corps on September 28, 2009. A second funding request was approved by the Corps on 8/11/2010. The project mitigates for stream impacts using USM funds. The Conservancy accepted donation of fee title over the approximately 225.2-acre tract to secure the long-term protection of the property in 2010. The Conservancy plans to manage this property as a preserve.

Mitigation activities at the site will include preservation of approximately 4,671 linear feet of Mill Creek and 183 linear feet of a tributary to Mill Creek. The project will also include enhancement (invasive species removal and planting) of approximately 1,903 linear feet of riparian buffer along Mill Creek. The total proposed mitigation area for this project is 179.8 acres, with 45.4 acres considered additional protected acreage. The restoration plan will be developed and implemented in early 2011, and the Year 1 monitoring of the buffer enhancement area will also be conducted in 2011.

Shenandoah River Basin

The Shenandoah River Basin is comprised of four HUCs (02070004, 02070005, 02070006, and 02070007) encompassing the headwaters of the Shenandoah River to the Potomac River. This basin is located within the Conservancy's Central Appalachian Forest Ecoregion. Conservation targets include Blue Ridge stream and tributaries, Central Appalachian mixed hardwood forest matrix, cave invertebrate communities, endangered wood turtles, freshwater mussels, and sportfish and nongame fish populations.

The projects discussed in this section serve as mitigation for permitted impacts within the Shenandoah River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates for 2010 are given for each project as applicable. No new projects were pursued in 2010.

The following table provides a summary of projects for which funds were approved in the Shenandoah River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 42: Approved Project Summary for the Shenandoah River Basin | | | | | | |
|--|--|---------------------|---------------------|---------------------------------|-----------------------------|----------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| SH-1 | Cedar Creek (Mowery) | M | 9/28/2006 | 0 | 0 | 1,576,000 |
| SH-2 | Blacks Run (City of Harrisonburg-Purcell Park) | M | 12/7/2006 | 0 | 0 | 496,535 |
| | | M | 9/24/2008 | 0 | 0 | 130,000 |
| SH-3 / UJ-3 | Laurel Fork (Rifle Ridge Farm, LLC) | M | 11/19/2007 | 0 | 0 | 1,034,749 |
| SH-4 | Shenandoah Mountain/Cow Knob Site | M | 2/17/2009 | 40,264.00 | 0.00 | 0.00 |
| | | | 8/28/2008 | 535,836 | 0 | 0 |
| SH-5 | Cedar Creek Site | M | 8/28/2008 | 0 | 0 | 150,000 |
| | | | Totals | 576,100 | 0 | 3,387,284 |
| | | | Grand Total | 3,963,384 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

| Table 43: Closed project summary for the Shenandoah River Basin | | | | | | | | |
|--|---------------------|--------------------|----------------------|-------------------------|---------------------------|-----------------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Non-Tidal Wetland Credits | Tidal Wetland Credits | Stream Activity | |
| | | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| SH-3 / UJ-3 | 11/19/2007 | 12/21/2009 | 1,034,749 | 6,566 | 1.49 | 0 | 32,223 | 0 |
| | | Totals | 1,034,749 | 6,566 | 1.49 | 0 | 32,223 | 0 |

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Shenandoah River Basin. In addition the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 44: Non-Tidal Wetland Project Summary for the Shenandoah River Basin | | | | | | | | |
|---|---------------|------------------------|---|------------|--------------------|-------------|-------------------------|-------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | |
| SH-3 / UJ-3 | C | 0 | 11 | 0 | 0 | 0 | 11 | 1.10 |
| SH-4 | LP, P | 10 | 0 | 0 | 6 | 0 | 16 | 10.40 |
| SH-5 | LP | 0 | 2 | 0 | 0 | 0 | 2 | 0.20 |
| | | | | | | | | |
| Sub-totals | | 10 | 13 | 0 | 6 | 0 | 29 | 11.70 |
| | | | | | | | | |
| Total Acres of Non-Tidal Impacts | | | | | 9.08 | | | |
| Total Mitigation Liability | | | | | 11.35 | | | |
| Total Proposed Credits | | | | | 11.70 | | | |
| Percent of Wetland Acreage Replacement | | | | | 110.1 | | | |
| LP - Pending finalization of land protection | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | CA - Corrective actions necessary | | | | | |
| C - Closed | | | PC - Pending project closure | | | | | |

As noted in Section II, the Fund has been used to mitigate for 14,797 linear feet of permitted stream impacts in the Shenandoah River Basin through 2010. The following tables summarize the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Shenandoah River Basin. These tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. Two projects have utilized pre-USM and USM funds.

| Table 45: USM Stream Impacts and Mitigation Summary for the Shenandoah River Basin | | | | | | | | | |
|--|--------|----------------------|-------|---|--------------------|-------|-----------------|---|------------------|
| Project Information | | Stream Activity (lf) | | | Upland Buffer (Ac) | | Mitigation (ac) | Additional Protected (ac) | Proposed Credits |
| Project ID | Status | Rest/Enh | Pres | Livestock | Rest | Pres | | | |
| SH-2 ⁺ | M | 862 | 0 | 0 | 1.68 | 1.87 | 3.55 | 0 | 874 |
| SH-5 | LP | 0 | 1,519 | 0 | 0 | 10.5 | 10.5 | 10 | 465 |
| Totals | | 862 | 1,519 | 0 | 1.68 | 12.37 | 14.05 | 10 | 1,339 |
| Total Linear Feet of Impacts (lf) | | | | | 2,669 | | | | |
| Total Compensation Required (TCR) | | | | | 2,387 | | | | |
| Total Proposed Credits (CC) | | | | | 1,339 | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | |
| C – Closed | | | | PC - Pending project closure | | | | *Project includes pre-USM and USM funding | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | | | | | |

| Table 46: Pre-USM Stream Project Summary for the Shenandoah River Basin | | | | | |
|--|----------------|-----------------------------|--|--|-----------------------------------|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| SH-1 | M | 16 | 1,700 | Riparian buffer planting 200 feet wide along each bank of 1,700 linear feet of Buffalo Marsh Run. Channel banks along this reach stabilized with live stakes. | 94 |
| SH-2* | M | 13.39 | 3,241 | Restoration/enhancement of 2,866 lf of Blacks Run, 705 lf of Siebert Creek, and 532 lf of an unnamed tributary to Siebert Creek. Riparian buffer planting and preservation ranging from 20 to 200 feet wide along both banks of Blacks Run, 20 to 80 feet wide along both banks of Seibert Creek, and 50 to 110 feet wide along both banks of the unnamed tributary. Funding for this project is both pre-USM and USM. | 0 |
| SH-3 / UJ-3* | C | 482.6 | 32,223 | Stream and riparian buffer preservation in the Shenandoah River Basin of 12,894 lf along both banks of Laurel Fork with a buffer ranging from 100-2,000 ft, 7,960 lf along both banks of Barkley Run with buffer widths ranging from 100-900 ft, 2,692 lf along one bank of Schoolhouse Run with buffer widths along the right bank of 100 feet and left bank of 35-100 ft, 2,569 lf along the left bank of Collins Run with a buffer width of 100 ft, and 6,108 lf along both banks of Blights Run with buffer widths on the right bank of 20-100 ft and left bank of 100 ft. Stream and riparian buffer preservation in the Upper James River Basin of 7,609 lf along both banks of Backs Creek and its tributaries with buffer width limited to the property boundary up to 100 ft. | 1,076 |
| | Totals | 511.99 | 37,164 | | 1,170 |
| Total Impacts: | | 12,128 lf | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| +Project includes pre-USM and USM funding | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Project Summaries

The following section provides a summary of each project located within the Shenandoah River Basin for which the Corps has authorized funds through 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2010 may be found in earlier reports as indicated below.

SH-1 Cedar Creek (Mowery)

Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream and riparian buffer enhancement at the Mowery property (also known as the Ogden's Cave project) in Frederick County. The Conservancy proposed to exclude cattle from the stream and plant a woody riparian buffer and live stakes along approximately 1,700 linear feet of Buffalo Marsh Run. The restoration activities were completed in spring of 2007.

The third year monitoring event was completed in 2010. The results of the monitoring indicated that the live stakes and riparian buffer plantings are meeting the success criteria with the exception of four buffer monitoring plots and three live stake monitoring plots which are not meeting stem density criteria. The Conservancy will conduct supplemental planting in these areas in early 2011. Invasive species, including spotted knapweed (*Centaurea stoebe*), Autumn olive (*Elaeagnus umbellata*), Chinese privet (*Ligustrum sinense*), wineberry (*Rubus phoenicolasius*), Japanese honeysuckle (*Lonicera japonica*), tree-of-heaven (*Ailanthus altissima*), and white mulberry (*Morus alba*) are present on the property. An invasive species management plan has been prepared and control efforts for the majority of these species are underway. The year 5 monitoring will be conducted in 2012.

SH-2 Blacks Run (City of Harrisonburg)

Please reference the 2007 and 2008 Annual Reports for details on this project.

The purpose of this project is to conduct stream restoration activities at a park in the City of Harrisonburg. The project mitigates for stream impacts using both pre-USM and USM funds. The Conservancy proposed to conduct restoration activities along approximately 3,375 linear feet of Blacks Run, 830 linear feet of Seibert Creek, and 540 linear feet of an unnamed tributary to Seibert Creek.

The stream restoration and buffer planting activities were completed in spring 2009. The total channel length in the mitigation area is 5,310 linear feet. Mitigation activities generated 1,774 linear feet of stream restoration, 2,329 linear feet of stream enhancement, 8 acres of buffer restoration, and 8.9 acres of buffer preservation. The project provides 874 stream credits under USM.

The first year of monitoring was completed in 2010. Monitoring results indicate that all stream stability and geomorphic metrics meet success criteria. All vegetation metrics also meet or exceed the success criteria with the exception of woody stem density in several of the live stakes plots. Supplemental planting will be conducted in these areas in spring 2011 to ensure future success. Invasive species, including Japanese hops

(*Humulus japonicas*) and tree-of-heaven (*Ailanthus altissima*) are present on the property. An invasive species management plan will be developed and implemented in 2011. The Year 2 monitoring will also be conducted in 2011.

SH-3 / UJ-3 Laurel Fork (Rifle Ridge Farm, LLC)

This project was officially closed in 2009. Please reference the 2007 and 2009 Annual Reports for details on this project.

SH-4 Shenandoah Mountain/Cow Knob Site

Please reference the 2008 Annual Report for details on this project.

The purpose of this project is to conduct non-tidal wetland restoration activities on a portion of a 200-acre property located in Fulks Run, Virginia. The mitigation area will be placed under a conservation easement. Long-term protection of the site will be accomplished through the monitoring and enforcement of the easement. The project will include a total of approximately 10.4 acres of wetland mitigation, including an appropriate mix of upland buffer (100 foot minimum), and emergent, scrub/shrub and forested wetland community types.

The Conservancy anticipates completion of land protection and wetland restoration activities in 2011.

SH-5 Cedar Creek Site

Please reference the 2008 Annual Report for details on this project.

The purpose of this project is to conduct a wetland, stream, and buffer preservation project on Buffalo Marsh Run adjacent to the Ogden's Cave property in Frederick County, Virginia. The property will be owned by DCR and protected with a deed of dedication which will require the property to be managed with the primary objectives of protecting stream water quality, natural heritage resources, and other native plants and animals. The project mitigates for stream impacts using USM funds.

Mitigation activities at the site include the preservation of approximately 1,519 lf of both banks of Buffalo Marsh Run, two acres of emergent wetland, and up to 10.5 acres of riparian buffer.

DCR and the Conservancy anticipate closing on this project in 2011.

Tennessee River Basin

The Tennessee River Basin is comprised of six HUCs (06010205, 06010206, 06010101, 06010102, 05070201, and 05070201) encompassing the headwaters of the Clinch, Holston, and Powell Rivers draining south into Tennessee. This basin is located within the Conservancy's Cumberland and Southern Ridge Valley Ecoregion. Conservation targets include endemic mussels and associated assemblages, Appalachian bogs, fens and seeps, Southern Appalachian forest matrix, upper Tennessee fish community, bats, karst communities, calcareous river-fronting slope communities and limestone and dolomite barrens.

The projects discussed in this section serve as mitigation for impacts within the Tennessee River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed below. Two new projects were approved in 2010. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2010 are provided below.

The following table provides a summary of projects approved in the Tennessee River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

| Table 48: Approved Project Summary for the Tennessee River Basin | | | | | | |
|--|--|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| TN-1 | Gray's Island (Holston Land Company) | M | 3/14/1997 | 0 | 0 | 7,000 |
| TN-2 | Barns Chapel (Gerry Smith Enterprises) | M | 3/28/2006 | 0 | 0 | 305,000 |
| TN-3 | Barns Chapel (Atwell) | M | 3/28/2006 | 39,000 | 0 | 0 |
| TN-4 | Upper Clinch River Site | M | 4/23/2006 | 3,000 | 0 | 3,000 |
| TN-5 | Pinnacle (Rich) | M | 6/16/2008 | 0 | 0 | 43,090 |
| TN-6 | Rich Mountain Site | M | 11/2/2008 | 43,000 | 0 | 0 |
| TN-7 | Upper Clinch River Site | M | 9/28/2009 | 0 | 0 | 367,464 |
| TN-8 | North Fork Holston site | M | 8/11/2010 | 865,000 | 0 | 0 |
| TN-9 | Cedars Site | M | 7/2/2010 | 0 | 0 | 183,000 |
| | | | Totals | 950,000 | 0 | 908,554 |
| | | Grand | Total | 1,858,554 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

| Table 49: Closed Project Summary for the Tennessee River Basin | | | | | | | |
|---|---------------------|--------------------|----------------------|-------------------------|-----------------|--------------------------|--------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Wetland Credits | Stream Activity | |
| | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| TN-1 | 3/14/1997 | 7/27/2007 | 7,000 | 0 | N/A | 6,000 | 6,000 |
| TN-3 | 3/28/2006 | 11/16/2007 | 39,000 | 1,366.34 | 1.44 | N/A | N/A |
| TN-4 | 4/23/2006 | 7/27/2007 | 6,000 | 0 | N/A | N/A | N/A |
| | | Totals | 52,000 | 1,366.34 | 1.44 | 6,000 | 6,000 |

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Tennessee River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 50: Non-Tidal Wetland Project Summary for the Tennessee River Basin | | | | | | | | | | |
|--|--------|-----------------|------|------|---|-------|--------------|----------|-----------|-------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation | Proposed | Completed | Additional |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | Acres | Credits | Credits | Protected Acreage |
| TN-3 | C | 0 | 0 | 4.01 | 0 | 2.11 | 6.12 | N/A | 1.44 | 0 |
| TN-6 | P | 0 | 0 | 7.9 | 0 | 15.2 | 23.1 | 3.39 | N/A | 0 |
| TN-8 | P | 19.8 | 0 | 1 | 10.9 | 0 | 31.7 | 20.86 | N/A | 0 |
| Sub-totals | | 19.8 | 0 | 12.9 | 11 | 17.31 | 61.1 | 24.27 | 1.44 | 0 |
| Total Acres of Non-tidal Impacts | | | | | | | 18.47 | | | |
| Total Mitigation Liability | | | | | | | 26.52 | | | |
| Total Proposed/Completed Credits | | | | | | | 25.71 | | | |
| Percent of Wetland Acreage Replacement | | | | | | | 107.2 | | | |
| LP - Pending finalization of land protection | | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | |
| P - Planning / permitting | | | | | M - Mitigation monitoring | | | | | |
| D - Pending delineation / assessment | | | | | CA - Corrective actions necessary | | | | | |
| C - Closed | | | | | PC - Pending project closure | | | | | |

As noted in Section II, the Fund has been used to mitigate for 5,359 linear feet of permitted stream impacts in the Tennessee River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Tennessee River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 51: Stream Project Summary for the Tennessee River Basin | | | | | |
|--|-----------------------|------------------------------------|---|--|--|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| TN-1 | C | 15.5 | 6,000 | Riparian buffer preservation of 4,000 lf along the right bank of the Clinch River and 2,000 lf along both banks of Cub Creek with an existing mature wooded buffer ranging from 75 to 100 feet wide. Livestock exclusion fencing installed to protect the same reaches of the Clinch River and Cub Creek. | 284.5 |
| TN-2 | M | 6.7 | 1,580 | Priority 1 relocation of 1,580 lf of Rattle Creek. Riparian buffer planting ranging from 35 to 250 feet along each bank for the length of the channel. Reconfiguration of an off-line pond and buffer plantings approximately 25 feet wide from the pond. Livestock exclusion fencing installed to protect 1,580 linear feet of the stream and the pond. | 0 |
| TN-5 | PC | 13.7 | 3,201 | Stream channel and riparian buffer preservation along 3,201 linear feet of the Clinch River. Riparian buffer preservation will include an existing forested buffer ranging from 143 to 200 feet wide. | 14.59 |
| TN-9 | P | 9.5 | 2,750 | Stream channel and riparian buffer preservation and 4.4 acres of riparian buffer enhancement along approximately 2,500 linear feet of the Powell River. Stream channel and riparian buffer preservation along 250 linear feet of a tributary to the Powell River. Riparian buffer preservation and enhancement will include a 200 foot buffer on the south bank of the Powell River and a 100 foot buffer along both banks of the tributary. | 32.5 |
| Totals | | 45.4 | 13,531 | | 331.59 |
| Total Impacts (lf) | | 5,332 | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

Project Summaries

The following section provides a detailed summary of each project located within the Tennessee River Basin for which the Corps has authorized funds during 2010. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

TN-1 Gray's Island (Holston Land Company)

This project was officially closed in 2007. For details on the project see the 2007 Annual Report.

TN-2 Barns Chapel (Garry Smith Enterprises, Inc.)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities and exclude livestock from a stream and pond at the Smith property located near Abingdon in Washington County. The Conservancy proposed to install livestock exclusion fencing, reconfigure a small pond, and conduct Priority 1 relocation on approximately 1,580 linear feet of Rattle Creek located on the property. Restoration activities were completed in 2007 and 2008.

The third year geomorphologic and vegetation monitoring event was completed in 2010. The results of the geomorphologic monitoring indicated that the site is performing as designed, and the streambanks and streambed are stable, other than one short section of the stream which has downcut slightly. The Conservancy will consider whether corrective action to address this area is warranted in 2011.

Vegetation monitoring indicated that live stakes and herbaceous vegetation are meeting success criteria. Based on the results of the 2009 monitoring activities, supplemental planting occurred in early 2010 in areas that did not meet stem density requirements per individual plot data. Occurrences of Chinese privet (*Ligustrum sinense*), multiflora rose (*Rosa multiflora*), spotted knotweed (*Centaurea stoebe*), and autumn olive (*Elaeagnus umbellata*) were noted in low abundance in the 2009 monitoring, and were treated in summer 2010. A few occurrences of the invasive multiflora rose (*Rosa multiflora*) were noted again in the 2010 monitoring. This invasive is not a problem at this point, but the Conservancy will continue to monitor the species. Chinese privet will be treated again in 2011 to prevent spread of this species. Orchard grass (*Dactylis glomerata*) and fescue (*Festuca spp.*) are also present on the site, but are being pushed out by the native vegetation and are not affecting site success. One curly dock (*Rumex crispus*) was noted in 2010, but this species is not becoming dominant at this point. The Conservancy will continue to monitor all invasive species and will develop an invasive species management plan and implement corrective action if it is needed.

The next monitoring event (Year 5) will be conducted in 2012.

TN-3 Barns Chapel (Atwell)

This project was officially closed in 2007. For details on the project see the 2007 Annual Report.

TN-4 Upper Clinch River Site

This project was officially closed in 2007. For details on the project see the 2007 Annual Report.

TN-5 Pinnacle (Rich)

The purpose of this project is to complete a stream mitigation project on the Rich Tract in Russell County, Virginia. Stream preservation will be conducted on approximately 3,393 linear feet of stream channel. Funding for this project was approved by the Corps on June 16, 2008. The landowner sold the Conservancy 28.29 acres of property, providing a buffer ranging from approximately 143 feet to over 200 feet adjacent to the main stem of the Clinch River. The proposed mitigation area is approximately 9.75 acres. The additional 19.04 acres purchased will be reported as "additional protected acreage." Long-term protection of the site will be achieved through a deed restriction. The Conservancy intends to transfer ownership of the property to the Virginia Department of Conservation and Recreation in 2011. The Conservancy staff completed a surface water delineation of the site on April 20, 2009. Based on the delineation, the 28.29-acre property contains 13.7 acres of riparian buffer mitigation area and 14.59 additional protected acres. The property preserves 3,201 linear feet of the Clinch River. Project closure will be requested in 2011.

TN- 6 Rich Mountain site

The purpose of this project is to complete a 23.1-acre wetland mitigation project on a tract in Russell County, Virginia. Funding for this project was approved by the Corps on November 2, 2008. Wetland enhancement activities, via cattle exclusion, will be conducted on approximately 7.9 acres of existing calcareous fen wetlands with an additional 15.2 acres of forested buffer preservation on the adjacent uplands. The proposed wetland mitigation area is wholly contained within an area currently held under a permanent forest management easement by the Conservancy. Additional restrictions will be added to the existing easement to meet mitigation requirements. The wetlands on the property are heavily impacted by cattle grazing and watering. In addition to fencing cattle out of the wetlands and establishing or maintaining a forested buffer, an alternative watering system will be installed along the Rich Mountain ridgeline. This will protect these high elevation wetlands that are currently impacted by cattle grazing and watering needs.

The project area contains approximately 8.0 acres of groundwater-controlled, non-alluvial wetlands that have been identified for potential enhancement. All of these wetlands are on lands which are currently grazed and impacted by cattle. These wetlands are seep driven and contain species that are indicative of calcareous fens, an identified globally rare habitat. Golden ragwort (*Packera aurea*), swamp lousewort (*Pedicularis lanceolata*), and royal fern (*Osmunda regalis* var. *spectabilis*) have been identified in the wetland enhancement areas.

The Conservancy is negotiating the terms of the restrictions that will be placed on the existing forest management easement. Fencing of the site and installation of the alternate water source are expected to occur in 2011.

TN-7 Upper Clinch River Site

The purpose of this project is to conduct a stream and buffer preservation project on portions of the Clinch River and its tributaries. However, negotiations have not proceeded, and the Conservancy anticipates closing this project in 2011 and returning unspent funds to the general balance.

TN- 8 North Fork Holston (KCI)

The purpose of this project is to complete a 31.9-acre wetland mitigation project on two tracts in Smyth County, Virginia. Funding for this project was approved by the Corps on August 11, 2010. The project consists of wetland restoration, creation, and enhancement activities on properties owned by two separate landowners. The properties are located in close proximity to one another and adjacent to the North Fork Holston River, approximately 8.5 miles northeast of Saltville, Virginia. Combined, the project parcels encompass approximately 262 acres, a majority of which is dedicated to agriculture and pastureland. The parcels are located within the floodplain of the North Fork Holston River and former wetland communities were likely Montane Floodplain Forest, with a predominance of hardwood species such as sycamore, black walnut, hackberry, American elm, and oak species. Some regional wetland communities may not have been influenced by riverine flooding and likely included Mountain Seepage Swamp fed by upslope seepage along hillsides. Typical tree and shrub species in the groundwater-fed communities likely included red maple, white ash, black ash, tulip poplar, sweet birch, and spicebush. These forest types will be targeted for restoration as part of the project. Combined, wetland mitigation activities on the project parcels will provide for restoration/creation of 19.8 acres of wetlands, and enhancement of 1.0 acre of existing wetlands. An additional 100-foot upland buffer will be established. The mitigation area will be placed under a conservation easement.

The Conservancy anticipates completion of land protection and wetland restoration activities in 2011.

TN- 9 Cedars (Brooks)

The purpose of this project is to conduct a stream and riparian buffer preservation and stream buffer enhancement project on a 42-acre property containing frontage on the Powell River and a tributary to the Powell River in Lee County. The property is a mixture of hayfield, upland forest, and riparian forest. There is a large spring flowing from the southwest corner of the property, approximately 265 feet into the Powell River.

Proposed mitigation activities include stream and riparian buffer preservation along 2,500 linear feet of the south bank of the Powell River and 250 linear feet of a tributary to the Powell River. Buffer planting on 4.4 acres will be conducted to extend the existing forested buffer on the Powell River to 200 feet. A buffer of 100 feet will be preserved on the tributary. The area outside of the stream buffers, approximately 32.5 acres, will be reported as "additional protected acreage". Funding for this project was approved by the Corps on July 2, 2010.

The Cedars (Brooks) site is directly north of approximately 300 acres of Conservancy-protected lands (the Fletcher Ford Preserve) made up of 6 properties on the Powell River, in a priority aquatic portfolio site (mussel recovery and protection) and nested within The Cedars priority terrestrial matrix landscape (rare karst and plant conservation), identified through the Cumberland's Southern Ridge and Valley Ecoregional Plan (2003) and the Clinch Valley Conservation Area Plan (CAP) (2009). This reach of the Powell River is in the McDowell Shoals-Tyler Bend Priority Aquatic Habitat Conservation Zone (PAHCZ). This area is one of five PAHCZs identified through the Clinch Valley CAP as a last remaining stronghold for critically-imperiled species

associated with the endemic Cumberlandian freshwater mussel assemblages of the upper Tennessee River system. Twelve Natural Heritage element occurrences, including 3 listed endangered and 1 listed threatened species, are known to occur on or in very close proximity to the property.

The Conservancy acquired the fee interest in this property in 2010, fully protecting the stream and buffer acres within the property. The Conservancy will own the property as part of the Fletcher Ford Preserve and monitor the property as part of that preserve. Buffer enhancement activities are scheduled to be completed in early 2011. Year 1 monitoring of the buffer enhancement area will also be conducted in 2011.

York River Basin

The York River Basin is comprised of three HUCs (02080105, 02080106, and 02080107) encompassing the headwaters of the Mattaponi, Pamunkey and York rivers draining east into the Bay. This basin is located within both the Conservancy's Piedmont and Chesapeake Bay Lowland ecoregions. Conservation targets include tidal freshwater systems, small Piedmont streams and tributaries, bald cypress forests, anadromous fishes, migratory land birds and raptors, seepage wetlands, Coastal Plain mixed pine-hardwood forest matrix, and calcareous forests.

The projects discussed in this section serve as mitigation for permitted impacts within the York River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2010 are listed on the below tables. Complete project descriptions for projects approved prior to 2010 may be found in earlier reports as indicated below.. Updates are given for each project as applicable. Complete descriptions of projects approved during 2010 are provided below.

The following table provides a summary of projects for which funds were approved in the York River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type. A detailed summary of each project is included in the section below.

| Table 52: Approved Project Summary for the York River Basin | | | | | | |
|--|-------------------------------------|----------------------------|----------------------------|--|------------------------------------|-----------------------------|
| Project ID | Project Name | Purpose of Proposal | Corps Approval Date | Funds Authorized | | |
| | | | | Non-Tidal Wetland Projects (\$) | Tidal Wetland Projects (\$) | Stream Projects (\$) |
| YK-1 | Po River (Leonard) | M | 3/28/2003 | 40,000 | 0 | 0 |
| YK-2 | Mattaponi River (Gwathmey 1) | M | 2/5/2004 | 50,000 | 0 | 0 |
| | | M | 2/20/2004 | 909,200 | 0 | 0 |
| YK-3 | Dragon Run (Beldon) | M | 8/5/2004 | 43,800 | 0 | 43,800 |
| CB-8 / YK-4 | Upper Crab Neck (BP North America) | M | 4/21/2005 | 7,500 | 0 | 0 |
| | | | 2/22/2007 | 1,068 | 0 | 0 |
| YK-5 | Cumberland Marsh (Healthvest, Inc.) | F | 7/1/2005 | 12,500 | 0 | 12,500 |
| | | M | 2/22/2007 | 73,375 | 1,000 | 223,125 |
| | | M | 8/11/2010 | 50,000 | 0 | 0 |
| YK-6 | Mattaponi River (Atwood) | A | 8/12/2005 | 45,300 | 0 | 30,200 |
| | | M | 5/2/2006 | 6,570 | 0 | 4,380 |
| YK-7 | Mattaponi River (Gwathmey 3) | M | 6/22/2006 | 22,145 | 0 | 0 |
| YK-8 | Mattaponi River (Bach 1) | A | 8/11/2006 | 6,500 | 0 | 0 |
| | | M | 12/15/2006 | 192,100 | 0 | 33,900 |
| YK-9 | Mattaponi River Site | M | 12/15/2006 | 0 | 0 | 14,077 |
| YK-10 | Mattaponi River (Bach 2) | M | 8/10/2007 | 17,567 | 0 | 0 |
| | | | Totals | 1,477,625 | 1,000 | 361,982 |
| | | | Grand Total | 1,840,607 | | |
| M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey | | | | | | |

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the York River Basin. In addition, the tables provide the amount of impact acres in the basin, the total

mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 53: Non-Tidal Wetland Project Summary for the York River Basin | | | | | | | | | | |
|--|--------|-----------------|-------|---|-------------|--------|------------------|------------------|-----------|---------------------------------|
| Project Information | | NT Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits | Completed | Additional Protected Acres (ac) |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | | Credits | |
| YK-1 | D,PC | 0 | 6.1 | 0 | 0 | 13.9 | 20 | 1.31 | N/A | |
| YK-2 | M | 6.45 | 44 | 4 | 15 | 135.55 | 205 | 19.96 | N/A | |
| *YK-3 | C | 0 | 2.11 | 0 | 0 | 2.15 | 4.26 | N/A | 0.32 | 34.32 |
| CB-8/ YK-4 | PC | 0 | 67.4 | 0 | 0 | 74.8 | 142.2 | 10.48 | N/A | |
| *YK-5 | M | 0.38 | 0 | 0 | 5.4 | 0 | 5.78 | 0.74 | N/A | |
| *YK-6 | D,PC | 0 | 36 | 0 | 0 | 0 | 36 | 3.60 | N/A | 24 |
| YK-7 | C | 0 | 0 | 0 | 0 | 18 | 18 | N/A | 0.90 | |
| YK-10 | C | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | 128 |
| Sub-totals | | 6.83 | 155.6 | 4 | 20.4 | 244.4 | 431.2 | 36.1 | 1.22 | 186.32 |
| Total Acres of Non-Tidal Impacts | | | | | 9.07 | | | | | |
| Total Mitigation Liability | | | | | 17.24 | | | | | |
| Total Proposed/Completed Credits | | | | | 37.3 | | | | | |
| Percent of Wetland Acreage Replacement | | | | | | 75.3 | | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | | | |
| C - Closed | | | | PC - Pending project closure | | | | | | |
| *Project includes stream or tidal wetland mitigation | | | | | | | | | | |

| Table 54: Tidal Wetland Project Summary for the York River Basin | | | | | | | | |
|---|---------------|---------------------------|-------------|---|--------------------|-------------|-------------------------|-------------------------|
| Project Information | | Tidal Wetland (Ac) | | | Upland (Ac) | | Mitigation Acres | Proposed Credits |
| Project ID | Status | Rest/Cr | Pres | Enh | Rest | Pres | | |
| *YK-5 | M | 2.96 | 0 | 0 | 0 | 0 | 2.96 | 2.96 |
| Acre Sub-totals | | 2.96 | 0 | 0 | 0 | 0 | 2.96 | 2.96 |
| Credit Sub-totals | | 2.96 | 0 | 0 | 0 | 0 | | |
| Total Acres of Tidal Impacts | | | | | 0 | | | |
| Total Mitigation Liability | | | | | 0 | | | |
| Total Proposed Credits | | | | | 2.96 | | | |
| Percent of Wetland Acreage Replacement | | | | | N/A | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | | | | |
| P - Planning / permitting | | | | M - Mitigation monitoring | | | | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | | | | |
| C - Closed | | | | PC - Pending project closure | | | | |
| *Project includes stream or tidal wetland mitigation | | | | | | | | |

As noted in Section II, the Fund has been used to mitigate for 1,289 linear feet of permitted stream impacts in the York River Basin through 2010. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the York River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

| Table 55: Stream Project Summary for the York River Basin | | | | | |
|--|-----------------------|------------------------------------|---|---|--|
| Project ID | Project Status | Stream Mitigation Area (ac) | Channel Length in Mitigation Area (lf) | Mitigation Activity Description | Additional Protected Acreage (ac) |
| YK-3* | C | 7.42 | 978 | Riparian buffer preservation of 978 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex. | Reported under the wetlands summary |
| YK-5* | M | 8 | 5,800 | Dam removal and stream restoration of 2,200 lf of channel and riparian buffer restoration along 3,600 lf along Holt's Creek the Pamunkey River. | 0 |
| YK-6* | D,PC | 12 | 4,500 | Riparian buffer preservation along 4,500 lf of one bank of the Mattaponi River with existing forested buffer extending 200 feet from the mitigation area. | Reported under the wetlands summary |
| | Totals | 27.42 | 11,278 | | 0 |
| Total Impacts (lf) | | 1,289 | | | |
| ac - acre | | lf - linear feet | | | |
| LP - Pending finalization of land protection | | | | I - Restoration/Enhancement/Creation activities in progress | |
| P - Planning / permitting | | | | M - Mitigation monitoring | |
| D - Pending delineation / assessment | | | | CA - Corrective actions necessary | |
| C - Closed | | | | PC - Pending project closure | |
| *Project includes wetland mitigation | | | | | |
| Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). | | | | | |
| Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping") | | | | | |

| Table 56: Closed Project Summary for the York River Basin | | | | | | | |
|--|----------------------------|---------------------------|-----------------------------|--------------------------------|------------------------|---------------------------------|---------------------------------|
| Project ID | Corps Approval Date | Corps Closure Date | Amount Approved (\$) | Amount Unallocated (\$) | Wetland Credits | Stream Activity | |
| | | | | | | Buffer Preservation (lf) | Livestock Exclusion (lf) |
| YK-3 | 8/5/2004 | 3/16/2009 | 87,600 | 66,065.84 | 0.32 | N/A | N/A |
| YK-7 | 6/22/2006 | 12/21/2009 | 22,145 | 2,858.12 | 0.9 | N/A | N/A |
| YK-8 | 8/11/06 12/15/06 | 3/16/2009 | 232,500 | 232,500 | N/A | N/A | N/A |
| YK-9 | 12/15/2006 | 2/17/2009 | 14,077 | 14,077.00 | N/A | N/A | N/A |
| YK-10 | 8/10/2007 | 11/29/2009 | 17,567 | 54.64 | N/A | N/A | N/A |
| Totals | | | 373,889 | 315,555.60 | 1.22 | 0 | 0 |

Project Summaries

The following section provides a detailed summary of each project located within the York River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

YK-1 Po River (Leonard)

The purpose of this project is to conduct a non-tidal wetland and upland buffer preservation project at the Po River property in Spotsylvania County. The funding for this project was approved by the Corps on March 28, 2003. The property was purchased by the Central Virginia Battlefields Trust (CVBT) and placed under easement in February of 2003. The easement is held and monitored by the Virginia Department of Conservation and Recreation (DCR). Long-term protection will be achieved in accordance with the conservation easement. No additional monitoring is required for this project.

Based on a delineation of surface waters and wetlands conducted on the site in December 2006, the property contains approximately 6.1 acres of wetlands and 13.9 acres of forested uplands. The project will be closed in 2011 pending confirmation of the delineation.

YK-2 Mattaponi River (Gwathmey 1)

The purpose of this project is to conduct a non-tidal wetland and upland buffer restoration, wetland enhancement and wetland and upland preservation project at the Gwathmey project in King William County. The initial funding for this project was approved by the Corps on February 5 and 20, 2004. Goals for the project include restoration/creation of 67.5 acres of forested wetlands on approximately 76.9 acres of former agricultural land, which was abandoned in 2004. Restoration efforts began in 2006 and included plugging of field ditches, creation of several seasonally flooded ponds, construction of a berm system, deep ripping of the surface soil, and planting of 44,450 bare root seedlings and 9,600 shrubs. Long-term protection will be achieved in accordance with the conservation easement which is held and monitored annually by the Conservancy.

Monitoring of the site in 2008 found that a majority (11 of 12) of the automated groundwater monitoring wells met the criteria for wetland hydrology, despite the dry conditions observed in 2008. Survival of planted tree species met success criteria (400 stems per acre or greater) in 15 of the 37 sample sites, a slight increase over the 2007 monitoring results (14 of 37). Despite the presence of wetland hydrology shown by the well data, only 10 of 37 plots met the criteria for hydrophytic vegetation.

Monitoring in 2009 indicated that the 12.5% success criteria for wetlands hydrology was met in 7/13 (54%) of the continuous groundwater monitoring wells. Two wells satisfied the 8-12% growing season standard, one well met the 5-8% growing season standard, and two wells failed. Vegetation monitoring in July of 2009 indicated low stem density of woody tree and shrub species following planting in 2007. Stem density ranged from 31 to 971 stems per acre, with an average of 171 stems per acre measured across the site. Only 3/35 (9%) of the monitoring plots showed stem densities that exceeded the 400 stems per acre success criteria. Wetland plants contributed to greater than 50% of the

dominant woody vegetation, as measured by relative stem density, in 31/35 (89%) of the monitoring plots, though stem densities for planted woody species ranged from 0 to 431 stems per acre, with an average of 114 planted stems per acre measured. Monitoring of the herbaceous plant community revealed total plant canopy coverage ranging from 33% to 97%, and averaging 69%, and total aerial coverage exceeded the requirement that areal coverage shall be a minimum of 50% after each monitoring year. Wetland plants contributed to greater than 50% of the dominant herbaceous plant aerial coverage in 1/35 (3%) of the monitoring plots, indicating that a hydrophytic herbaceous community has not become established on the site. However, wetland plants contributed to greater than 50% of the dominant plant community across both the herbaceous and woody strata in 18/35 (51%) of the plots. Precipitation was generally shown to be below average during the early part of the 2009 growing season, which may have contributed to both the lack of wetlands hydrology in four continuous groundwater monitoring wells and apparent development of an upland herbaceous plant community.

No monitoring occurred in 2010. However, corrective action occurred in 2010 to bring the site into compliance with the forested wetland goal for the site. Corrective action in 2010 entailed replanting of wetland sapling and shrub species in restoration areas where the 400 stems per acre success criterion was not met. Approximately 18.7 acres of the site received supplemental re-planted utilizing bare-root seedlings, tree shelters and protective matting. The goal of re-planting was to increase woody stem density in wetlands restoration areas exhibiting wetlands hydrology as well as associated upland buffer areas. This site is on a post construction and mitigation monitoring plan that extends through 2016 with reports submitted to the Corps in 2011, 2013, and 2016.

YK-3 Dragon Run (Beldon)

The project was officially closed 2009. Please reference the 2009 Annual Report for more details on this site.

CB-8/YK-4 Upper Crab Neck (BP North America)

The details of this project are included under the Chesapeake Bay River Basin summary.

YK-5 Cumberland Marsh (Healthvest, Inc.)

The purpose of this project is to conduct non-tidal wetland, tidal wetland, and stream restoration at the Cumberland Marsh Preserve in New Kent County. The funding request to complete a feasibility study for the site was approved by the Corps on July 1, 2005. The funding request for restoration costs was approved by the Corps on February 22, 2007. The Conservancy has owned and managed the preserve since December 28, 1993. The preserve is comprised of a mixture of freshwater tidal marsh, open-water impoundments and wooded upland, and provides habitat for wetlands species and migrating waterfowl, as well as a large population of the federally-endangered sensitive joint vetch (*Aeschynomene virginica*). Long-term protection of the site is achieved through ownership by the Conservancy.

Feasibility studies completed in 2007 confirmed that the dam and impoundment are not structurally stable, and their removal combined with restoration of a natural stream channel and associated wetlands will benefit water quality and habitat. Design and

construction plans were completed in 2009. The project involves the selective removal of two earthen embankment dams located on an unnamed tributary to Holt's Creek, which in turn drains to the Pamunkey River. The two dams were constructed approximately sixty years ago, and were in disrepair, posing a continual threat to adjacent Holt's Creek and the Pamunkey River. Wetland, stream and buffer restoration activities began in late autumn 2010, and consisted of removal of the two earthen dams with relocation of the dam spoil material to adjacent upland farm fields. Drawdown of the two lakes and subsequent removal of the two earthen dams allowed for re-introduction of tidal exposure to approximately 2.96 acres of tidal wetlands. An additional 2.53 acres of non-tidal hardwood swamp has been restored in the footprint of the former impoundments. Approximately 2.15 acres of non-tidal fringing wetlands were previously identified around the former lakes. Re-planting of newly exposed areas following lake drawdown will restore tidal freshwater marsh, tidal shrub swamp and hardwood swamp to former degraded wetland and open-water habitat. A new stream channel (approximately 1,730 linear feet above tidal influence) has developed naturally, as previously observed in portions of the upper impoundment during periods of pronounced surface water elevation reduction. Active stream restoration was limited to two in-stream log grade control structures, which were installed to stabilize the stream channel in the vicinity of the upper dam. Beaver activity will likely further contribute to the development and maintenance of wetlands. Accounting for the expected loss of fringe wetlands surrounding the current impoundment as a result of dewatering, the project will result in the net gain of approximately 3.34 acres of wetlands.

The sensitive joint vetch (*Aeschynomene virginica*) is a federally threatened plant species known to occur in the general project area. Several populations of sensitive joint vetch were discovered in the immediate project vicinity during construction, and design elevations were adjusted accordingly to avoid the populations and create additional habitat for the federally threatened plant species. Additionally, inter-tidal areas within the former impoundment will provide suitable habitat for the sensitive joint vetch, given the opportunity for colonization from adjacent vigorous populations.

In addition to the proposed restoration activities at the impoundments, TNC has enhanced the wooded riparian buffer along sections of Holt's Creek and the Pamunkey River through the planting of additional hardwoods to extend the existing wooded buffers to 100 feet

Monitoring of the tidal and non-tidal wetland restoration and stream restoration site will be completed in years 1, 2, 3, 5, 7 and 10 following completion of restoration activities. The first growing season following restoration is 2011.

YK-6 Mattaponi River (Atwood)

The purpose of this project is to conduct a real estate appraisal and acquisition of a conservation easement on this approximate 72.50 acre property for a stream and non-tidal wetland preservation project. The site is located near the town of Aylett in King William County, and is bordered by the Mattaponi River. The funding for the appraisal was approved by the Corps on August 12, 2005, with subsequent funding for easement acquisition approved on May 2, 2006. The Conservancy completed negotiations with the landowner and signed the easement at the end of 2009.

Following completion of a delineation to determine mitigation credit, the Conservancy will request closure of this project in 2011.

YK-7 Mattaponi River (Gwathmey 3)

The project was closed 2009. Please see the 2009 Annual Report for more details on this project.

YK-8 Mattaponi River (Bach 1)

The project was closed 2009. Please see the 2009 Annual Report for more details on this project.

YK-9 Mattaponi River Site 2

The project was closed 2009. Please see the 2009 Annual Report for more details on this project.

YK-10 Mattaponi River (Bach 2)

The project was closed 2009. Please see the 2009 Annual Report for more details on this project.